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ABSTRACT

This 2-part report on experiential learning is a product of the University Governance for Community Relations aspect of the University of Pittsburgh University-Interface Program. This report highlights some of the major issues concerning the development of the experiential learning component in higher education. To facilitate this discussion, a number of examples are drawn from a case study carried out in 1971 and 1972 at the University of Pittsburgh. Part one presents the contributions of professional schools to the development of experiential learning. Part two indicates trends in experiential learning at high school and undergraduate levels. Related documents are HE 004 194 and HE 004 198. (MJM)

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EXPLORATIONS IN EXPERIENTIAL LEARNING

PART I: EXPERIENTIAL LEARNING IN CONTEMPORARY EDUCATION

PART II: A DESCRIPTIVE INVENTORY OF SELECTED EXPERIENTIAL LEARNING PROGRAMS AT THE UNIVERSITY OF PITTSBURGH

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By

Michael Sugg

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PART I

EXPERIENTIAL LEARNING IN CONTEMPORARY EDUCATION

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INTRODUCTION

The overall purpose of this paper is to highlight some of the major issues concerning the development of the experiential learning component in higher education. The intent is to provide the reader with a fairly broad national perspective concerning the major issues of experiential learning, the contributions of professional schools to the development of experiential learning, current trends at the high school and undergraduate levels, and administrative considerations in carrying out experiential learning programs.

To facilitate this discussion, a number of examples are drawn from a "case study" carried out in 1971 and 1972 at the University of Pittsburgh.* This study represents an attempt to document the current picture of what is happening in experiential learning settings at the University of Pittsburgh from the point of view of those most responsible for administering and implementing such programs and is offered as Part II of this report. The major emphasis is on professional schools, although some references are also made to Arts and Science courses at the undergraduate level. In order to assess current trends, it is necessary to begin by asking about the nature of recent changes, the major problems encountered, and what the future holds for these experiential programs. For the case study, answers to these questions were given by faculty representatives from various professional schools at the University of Pittsburgh through open-ended interviews. At least three faculty members from each school were interviewed; in larger schools as many as eight persons were seen.

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*Michael Sugg, Explorations in Experiential Learning, Part II, A Descriptive Inventory of Selected Experiential Learning Programs at the University of Pittsburgh, Office of the Secretary, University-Urban Interface Program, 1972.

Concrete illustrations from the case study are frequently drawn upon in the following pages to supplement the discussion of the more general context.

During the course of the case study, the investigator explored many sources to learn more about the historical and contempory national picture with respect to experiential learning. The presentation of opinions concerning these in the following pages may, at times, seem somewhat biased in support of experiential programs. However, it must be stressed that those who have written most on the subject are often very strong proponents of experiential learning and are inclined toward emphasizing the advantages and underplaying the problems. Nevertheless, opposing opinions are presented as far as feasible, and there is no intention to present a biased picture. Rather, it is hoped that a delineation of the issues can assist others interested in this area to a clearer understanding of the current phenomenon of expanded interest in experiential learning.

Experiential Learning Defined:

The term "experiential" has potentially very broad scope. Although this is not necessarily the case, an experience of any kind can involve learning. For the purposes of this study, a working definition of experiential learning was adopted, composed of the following parts:

(a) A learning experience that takes place outside the classroom;

(b) but within the context of and sponsorship of an academic department;

(c) the purpose of which is to include in the curriculum a "learning by doing" component to supplement the students' acquisition of academic skills;

(d) and entails a clearly identifiable learning experience by the above criteria of at least two months cumulative duration.

Of course, learning "by doing" has been the primary method of learning since the beginning of man. Yet, it is only recently in man's history that such learning has become organized, systematized, structured and principled at the university level, in an effort to promote a competent level of service. Prior to the industrial revolution, this type of learning took place at home or in the craft guilds. In essence, it is the kind of learning that is done by acting and experiencing the consequences of action. Thus, it implies the notion of responsibility and learning "in the school of hard knocks." The significant issue in relation to this changing scene is that the school today represents the means by which to "fill the vacuum that the changes in the family and workplace created."[1] The student role of young persons has become enlarged to the point where that role constitutes the major portion of their youth. "But the student role is not a role of taking action and experiencing consequences. It is a relatively passive role, always in preparation for action, but never acting."[2] Through the enlargement of the student role, a major transformation of learning took place, one that was so obvious as to be easily overlooked by many. The teacher became the major model from which to learn, thus replacing action as the medium through which learning had taken place in the family or workplace.

Although the lack of experience on the part of our young people may have caught up with us, universities are also bound by their historical traditions and conflicts. It is necessary, then, to consider these briefly for they also bear on the present confusions and conflict about educational goals in higher education.

Historical Perspective:

The first universities of America were concerned with "the development of mental and moral facilities, focusing on intellectually mental discipline, by which it meant the sharpening of the mind on the whetstone of Greek verbs. The curriculum was prescribed; relevance to later life was ignored, although this training was quite relevant to, say, a future minister."[3]

Early university education and the historical ties with England shaped the type of undergraduate education a student received, and the liberal arts college still reflects this influence. However, as students and faculty pursued advanced research, graduate schools developed. This evolution of knowledge seeking through scientific methodology was promoted during the 18th century when "the University of Berlin became the prototype with its emphasis on research and the advancement of knowledge rather than on teaching and the growth of its students."[4]

In spite of the increasing emphasis on research, American universities also became committed to service as a part of their function. The establishment of the Land Grant Act of 1862 by the federal government gave formal recognition to this aspect of education. This, in turn, had the effect of admitting new subject matter (agriculture and engineering) as well as a new type of student. Such a change also "provided an enormous democratization influence, legitimatizing new professions and new age groups for university study. Universities began to develop extension programs, got involved in political reform, and established service bureaus and experimental stations."[5]

Thus, universities today reflect a diversity of roles as evidenced by the historical influences of British, German, and American educational systems. However, to assume that these various influences and methods of learning operate in a harmonious fashion would be to avoid some of our basic conflicts within the university today. "The essential conflicts over the purposes of universities were never resolved in this country. Instead, they were all brought into an uneasy balance, leaving their implications subject to even greater conflict!"[6]

In relation to experiential learning, conflict continues "between the view that knowledge resides primarily within academic walls and the feeling that the real knowledge lies outside these walls. Today, this manifests itself in confusion over experience versus classroom."[7] For professional schools, however, the combination of theory and practice are both essential. There is no either/or attitude concerning theory and practice, although there may certainly be a heavier emphasis on one type of learning, even within a professional school.

Aside from these internal philosophical differences, there are other recent influences that have affected the experiential learning of students. Most prominent among them are what can generally be described as the "urban crisis" which includes racial, pollution and population distribution problems. The following statement describes the crisis situation:

> During the mid-sixties to the present time, two major crises have emerged; one is the university's response to urban crisis; the second is the crisis within the universities. Thus, pressures from without and within the university have promoted change and greater commitment on the part of many universities, to the contemporary problems of the urban interface. From the Berkeley riots in 1964 which spread to other universities across the nation and world, universities have been required to meet increased demands.[8]

The increased demands were primarily concerned with attacks against social injustice, particularly in reference to minority groups and a demand for "more relevancy" in the educational process.

It is beyond the scope of this paper to enlarge upon the problems of contemporary universities in setting priorities and allocating resources given conflicting views on the functions of the university. The aforegoing is only an attempt to set forth the context in which current trends in experiential learning emerge.

Present Concerns Relating to Experiential Learning in Higher Education:

As has been noted, underlying the issue of whether the university should provide more experiential learning opportunities at the undergraduate level is the basic concern for what the university represents. For example, the university was not originally conceived of as being the "guiding light" of the community. At the same time, it must be recognized that most univerisites are very much involved with the immediate community through their consultations, seminars, and continuing education programs. Rossman discusses the issue of university goals more emphatically and critically when he says:

> There is little clear and useful discussion of what the university's function ought to be, or might be; of whether it serves its present functions well; or indeed, of whether it should serve them quite differently. We do not know what the institution is good for..., if education is the process that ought to give people the ability to meet their individual and social needs, our education is disastrously inadequate.[9]

If this is the case, then the issue of experiential learning will have to be debated within this context, wherein educational goals are not clearly stated and well understood. This is a painful reality with which educators are confronted.

The Growth of Experiential Learning and Problems of Context, Definition, and Evaluation: Although experiential learning is not a new phenomenon in university education, the use of experiences of various kinds as a means of educating the individual is gaining recognition on several fronts. The co-operative work-study plan has been extended widely through governmental encouragement in economic-opportunity programs. Study abroad programs are available at hundreds of colleges. Certain law and other professional schools are providing community experiences for their students. Some medical schools are bringing clinical experience into the first year of study. College students everywhere are insisting on participation in decision-making, and this too is potentially educative. Some of the newer educational methods themselves emphasize personal experience (for example, programmed learning and independent study). These methods are in contrast with the more passive ones that dominate most college teaching.[10] Algo D. Henderson, former President of Antioch College, summarized his philosophy concerning experiential learning in higher education as follows:

> One could use experience as one of the primary methods in developing the whole personality, which includes increasing the ability to think effectively and to couple the thinking of the individual with his acting and living. The aim is to make the learning process more genuine, more meaningful to the student, and to teach him how to make his thinking on social problems applicable to the culture in which he lives.[11]

At the same time, Henderson points out that all experience is not educative. "Experience can be either educative or miseducative. John Dewey made this distinction clear. He called miseducative those experiences which engender callousness and lack of sensitivity and responsiveness."[12] On the whole, however, Henderson is a proponent of experiential learning, as are others who argue that today's youth, more and more of whom enter college, lack experience due to the lenghthy nature of their educational sojourn. Henderson and others argue that college students should have an opportunity to engage in experiential learning early in their collegiate careers, rather than waiting to determine career choices and interests at the graduate level. On the other hand, there are those who would oppose this view. Coleman[13], for example, feels that educational institutions should not be burdened with the responsibility for providing these kinds of opportunities. Rather, he believes that such learning should take place in economic institutions outside of the school; that is, in the institutions that are responsible for the economic development of our society.

Internal to the programs there is contention about what constitutes a valid experiential learning situtation,which will continue until some acceptable guidelines have been determined. There is a need to differentiate between apprenticeship training, on the job training, and experiential learning situations with no job implications. Until such differentiation occurs, it is difficult to find ways to evaluate experiences in terms of credit to be received.

A related issue is the complex question of what is meant by a "quality" educational experience. This is particularly difficult to establish in new experiential situations where the specific needs of the students are expected to take precedence over traditional courses, credits, and academic standards. Under these circumstances, criteria for evaluating new experiential situations in terms of student performance and educational objectives are very hard to develop. Even the professional schools, who have long been in the business of evaluating experiential learning performances, have problems in this area. Although the professional schools do have guidelines for evaluating performance, the way in which faculty understand and use these guidelines can be different. There are therefore subjective variations in assessment of student performance in experiential learning.

Supervision, Student-Faculty Ratios, and Learning Sites: There is a continuing shortage of supervisors for students in experiential learning programs, and this seems to be related, at least in part, to accreditation standards devised by professional associations. These standards very much restrict the range of persons who can be recruited for student supervision. They must have what are considered full academic qualifications. There are those who feel that standards for accreditation should be maintained, yet could be made more flexible, so that persons who have not completed their qualifications could yet be considered competent to supervise learning experiences. A second alternative for alleviating shortages which has been suggested is the lowering of barriers between schools so that different schools could cooperate and pool their supervisory resources. Without more flexibility of some kind, the shortage of supervisors is expected to continue. Henderson argues: "The standards of accrediting agencies by their very nature as watchdogs for the establishment relate to the past and present and take little account of the future. Where licensing or accreditation are involved, the laws, together with the regulations of the licensing boards, define the educational standards and lag far behind the current scene. Ways must therefore be found to take advantage of'equivalents' and to work with the licensing agencies in an effort to secure liberalization of the provisions."[14]

Established or accepted faculty-student ratios are also subject to examination in light of the shortage of supervisors. Very often faculty believe a certain ratio is optimal, and, in experiential learning programs, this usually means a very small number of students assigned to each instructor. In the case study of experiential learning programs at the University of Pittsburgh, for example, it was found that the ratio of one supervisor for every 1-5 students was most frequently used in the professional schools. Medical schools, which traditionally have been slow to expand enrollments, have often based their reluctance on an unwillingness to increase student-faculty ratios. Yet there is some question as whether the number of students involved per instructor has an effect on the quality of the education received. For example, Sanazaro, who researched this problem in medical schools, concluded: "The available data support the conclusion that class size itself is unrelated to objectively definable major components of the educational process in medicine, and it can be concluded that medical education of acceptable quality is relatively more economical in the larger schools."[15] A possible method for alleviating shortages and reducing costs into the bargain, then, is to increase the number of students assigned to each supervisor. Other means which have been suggested include the increased use of visual aid media for at least some specific learning needs.

There is also a shortage of appropriate experiential learning sites which must be realistically acknowledged by those interested in promoting such programs. This is probably particularly difficult for evolving programs whose worth has not yet been proven or recognized, but it is also a problem in the schools of education at the present time. In the case of evolving programs, many community agencies and institutions are wary of taking on students, for whom they must shoulder part of the responsibility for training without being sure that any rewards will accrue to themselves. Even at the level of medical and dental schools, some community groups have rejected the notion of allowing students to "practice on them", even while they urgently need health services. In any community there is a limit on the number of suitable sites available. At the University of Pittsburgh, in fact, some of the graduate and professional schools (psychology and hospital administration) have had to search for sites outside the Pittsburgh area in order to place their students. Since the limitation in sites available forces curtailment in enrollment, alternatives have been sought. For example, in some schools simulation games or exercises have been introduced to expose the student to a wide variety of problem-solving situations. Role playing and listening to tapes have been used in education for some time, and they too may offer helpful guides to understanding real life situations. There is also potential for developing experiential learning equivalents in the new and rapidly developing field of visual aids in education. There will, however, be resistance to using "artificial" modes in experiential learning. Perhaps combinations of simulated and real situations can be worked out to conserve the use of learning sites.

Remuneration and Expansion: Students in experiential learning situations at the undergraduate level generally do not receive remuneration for their contributions (the work-study program is an exception). However, graduate students are often paid through governmental scholarships, or by stipends, or by agencies, or, as in the case of graduate students in education, by school districts. Medical students do not receive any remuneration until they are interns; intern pay is usually in the form of free meals and lodging at the hospital. Currently, there is pressure in some medical schools to have those students having earlier experiences in internship (during the senior year of medical school) receive remuneration. This relates to an older and still unresolved controversy as to whether the student teacher, the medical intern, the social work student deserves to be paid for activities in the community. Some think that, during the educational process, the student is not yet a fully-fledged professional and therefore not entitled to remuneration. Others believe students, in certain programs at least, are providing services which should be monetarily rewarded. In view of the changing composition of graduate students, many of whom today are married and have begun to raise families (and all of whom are having to cope with spiralling costs), there is likely to be increased pressure for more and earlier remuneration for students in internships and other experiential learning. The pressure in part will be supported by the argument that payment of students makes them even more aware of their responsibilities and commitments to provide adequate service. Counter-arguments, however, will be raised on the grounds that students who are paid are likely to become agency-oriented rather than learning-oriented, and that this entails a narrower view of learning objectives.

The issue of expansion in the professional schools should also be discussed. Expansion of enrollments is related to problems which were discussed in the previous section, that is, those of supervision, faculty-student ratios, and learning sites. At this point, however, the primary concern is with financing and market considerations. By and large, the numbers of students in the professional programs across the country have been gradually increasing, although there are some exceptions. Recently financial cutbacks, particularly from the federal level, have curtailed support for certain schools. To give examples from the case study, the enrollment at the School of Education at Pittsburgh, like other schools in the nation, has had to be reduced rather drastically. Financial cutbacks also have affected the School of Social Work where a large percentage of the students found themselves without scholarships or government funding. These students may have to drop out unless they can manage the financing of the remainder of their graduate educations by loans or other means. In spite of these exceptions, however, there is a generally recognized need for more professionals and auxiliary personnel, and the climate is moderately expansionary within the limits of available funding and other key resources.

Levels of enrollment are to a large extent dependent on visible demand in the labor market. But the situation is somewhat more complicated than the concept of supply and demand would indicate. Reduced financial support for the schools of education in the country, for example, is justified on the basis of over-production of teachers relative to the needs of the schools. Yet at the same time, there is abundant evidence that many institutions, perhaps particularly those harboring the handicapped, the retarded, and otherwise disadvantaged, could use many more teachers, not to mention other professional personnel. Whether or not perceived needs for more personnel will be filled, and how much and in what areas expansion should be undertaken, does not then depend entirely on what can be determined about current and future demand in the labor market.

The broader issue, rather, is one of political and economic priorities for the country at large.

Summary

An attempt has been made in this introduction to elucidate some of the concerns which have been generated with respect to an increased interest in experiential learning programs. Such programs are firmly established in professional schools which have traditionally relied on internship programs, yet even here changes are taking place. Experiential learning programs are also spreading into professional schools and graduate programs where they have not in the past been part of the curriculum, and they seem to be filtering down to the undergraduate level as well. These developments have been praised by some who feel that today's youth entering college do not have much opportunity to develop awareness of and responsibility to their overall environment. At the same time the new interest in experiential learning has created controvery among educators, and raised a number of problems yet to be resolved.

CONTRIBUTIONS OF PROFESSIONAL SCHOOLS TO THE DEVELOPMENT OF EXPERIENTIAL LEARNING

Nationally, professional schools have provided the prototype from which other experiential learning programs were developed, and these schools are also leaders in introducing modifications of those models. The original model of the professional schools called for academic learning and practice to proceed simultaneously, thus linking the acquisition of knowledge to the responsible exercise of skills. As technological advances and research knowledge accelerated, the requirements for the professional also increased, resulting in longer periods of training and increased specialization. This emphasis on the development of knowledge and skills appropriate to the competent profession is still the primary one in the professional schools.

In recent years, however, there has been more attention to community service. A very early departure in professional training in this respect occurred in the land-grant colleges which offered service to the rural areas through agricultural and engineering schools. More contemporary departures have involved both community awareness and innovations in teaching approaches. For example, the medical schools have introduced community psychiatry and community medicine into their curricula, with the result that there is a new kind of exposure in experiential learning and a greater awareness of community influences in medicine. The nursing profession has expanded its programs to include community and public health concerns, as well as adding training to assume some of the physicians' tasks. Schools of social work have taken on more responsibility for training paraprofessionals, and have added programs for undergraduates who now receive training in social work and in health-related professions, such as physical therapy and medical technology. Schools of education have begun to depart from the traditional teaching model and are experimenting with team-teaching approaches. These are examples of changes which result from many forces operating in connection with the interface between the professional schools and the communities in which they are located. The rapidity with which some of the changes are taking place tends to belie the image of the professions as representing the more conservative elements of universities.

The very nature of the traditional involvement of the professional schools with the community through an emphasis on practice and experience as essential components of training has caused these schools to be especially aware of contemporary issues and to move in new directions. Among the recent changes which have been promoted, not without controversy, and which will be discussed in the remainder of this chapter, are: greater concern for the community; more emphasis on problem-solving approaches; trends toward interdisciplinary teaching; increased flexibility in career objectives; increased attention to theoretical-experiential integration; changes in practitioner roles; and the involvement of undergraduates in professional schools. In a final section, some of the difficulties encountered by the professional schools in the process of change will be considered. In this chapter particularly, material from the case study of the University of Pittsburgh will be drawn on frequently for illustrative purposes.

Community Concern: Whereas traditional "programs of the professional schools have tended to be career directed, or, as in agriculture, commodity based, the innovative professional schools are defining for themselves larger frames of reference, and their aim is to do more than merely prepare men for niches in their professions."[16] At the University of Pittsburgh this trend toward a larger frame of reference is evidenced in curriculum changes and especially in the contexts in which experiential learning takes place. For example, interns in education increasingly serve their terms in the "inner" city rather than in suburban areas. In the medical school, students involved in community medicine are receiving a number of learning experiences in the community in the course of their training. As in other law schools around the country, students in the School of Law at Pittsburgh work with disadvantaged persons through Neighborhood Legal Services and also assist prisoners with law problems. Nurses enter the most disadvantaged neighborhoods to assess health needs and offer services to residents. In the dental school a course is offered, entitled: "Professional and Social Perspectives," which is aimed at providing an understanding of wider community dental needs.

The movement toward the use of non-traditional experiential sites among all the professional schools at the University of Pittsburgh is, in part, an effort on the part of these schools to provide more services where the problems are, or, at least, to assist people in finding out how and where to obtain needed services. It is also apparently a result of pressures from social-change oriented students who have developed their own ideas about what constitutes meaningful service. Although it is too early to assess the long-range effect of the trend toward greater concern and awareness for community needs, it is clear at this point that it is present and on the increase in graduate schools.

The Use of Problem-Solving Approaches: For many years problem-solving in both classroom exercises and in the experiential situation has been largely confined to the case study method. Although this method is still used widely, there has been a shift away from a case-by-case approach toward broader problem-solving approaches in professional schools across the country. This shift has been activated by the tremendous increase in the amount of knowledge available to professionals. It seems quite impossible to assimilate major portions of this knowledge without moving to synthesis and analysis at a higher level. Thus, at the University of Pittsburgh School of Medicine the time traditionally spent by students in the laboratory has now been reduced in favor of a course on problem-solving aspects of the scientific method. The School of Social Work, which has relied heavily on the case method, has been making a strong shift toward the problem-centered approach in the study of certain social problems, particularly mental health and alcoholism.

The Trend Toward Interdisciplinary Teaching: The broader objectives of the professional schools imply that "no professional school today can function without recourse to other disciplines and fields. There must be interdisciplinary exchanges and interprofessional collaboration. Instances of the latter occur in the legal, mechanical, and electronic aspects of medicine. Today, fifty per cent of law schools have medico-legal courses and ninety per cent of the medical schools offer legal medicine."[17] The trend toward interdisciplinary approaches to learning at the national level is reflected in a number of collaborative efforts at the University of Pittsburgh, for example, between sociology and medicine, between social work and public health, and between social psychiatry and sociology. Most of the above efforts, however, occur in doctoral problems with research foci.

Most students working toward masters degrees then would not be exposed to this kind of cross-fertilization in thinking and teaching. The mental health field at Pittsburgh also promotes a considerable exchange of knowledge and teaching perspectives through seminars and special workshops. It is not uncommon, for example, for a psychiatric clinic to include in its weekly staff conference diversified professionals such as psychiatrists, social workers, and psychologists, in addition to psychiatric residents or interns and students from other professional schools.

If trends toward interdisciplinary teaching continue, what is learned may facilitate the development of theoretical knowledge related to experiential learning programs. Many believe that it is necessary to develop a broad approach to apply to human problems. As Rossman points out, "The trouble is that all real human problems are transdisciplinary. The point is...jobs are becoming transdisciplinary, and the university is not training people this way."[18]

Flexibility in Career Objectives: Professional schools are trying to build more flexibility into their programs in order to provide for a variety of student interests and goals. The underlying philosophy is that career possibilities should be individualized, and this philosophy is represented in the intellectual and experiential components of the learning process. At the University of Pittsburgh's School of Medicine, as in other medical schools across the country, the trend is to recognize that emerging medical specialties will require different forms of medical training. In newer careers in public health, in academic medicine, in community medicine or research, the traditional internship may no longer be required for those medical students who pursue specialties where medical practice is not involved. In the School of Dental Medicine at Pittsburgh, students are allowed to take more or less than the traditional three years to complete their training, depending on the progress of the individual student. "The curriculum committee introduced this proposal which reflects recognition that individual students will achieve and expand their competencies at varying rates and that performance, not time, is the most reliable measurement."[19] In the School of Social Work students are allowed more flexibility in their programs depending on previous educational experience and ability to function independently in the experiential situation. Related is a trend in the same school toward a less intensive tutorial relationship between student and field instructor, so that the student's ability to function independently after graduation will be enhanced.

Prerequisites for entering professional schools generally are becoming much more flexible. Medical schools have started to require less laboratory work prior to entrance, and there will be less emphasis on specific course requirements. Instead, examinations will be given at the point of entrance to test a student's overall knowledge and ability. The Law School at the University of Pittsburgh, like many other law schools in the country, has extended its admissions policies to permit persons with less qualified academic backgrounds to enter. This program has evidently been successful, for students from such backgrounds have had no difficulty in finding positions after graduation.

Theoretical-Experiential Integration: Professional schools in the country are concerned about the way theory and practice are related in the curriculum. At the University of Pittsburgh, the faculty in the professional schools are very explicit about the necessity to provide students with a thorough conceptual grounding which can also be applied to their experience. In this connection, some of the newer professional schools are attempting to gain greater control over the experiential situation by providing their own instructors. This has always been the usual practice in medical, dental, and nursing schools. At Pittsburgh, as in many other professional schools, more use is being made of simulation exercises as a method of relating theory and practice. For example, business students play games related to their training with the assistance of computers. Law schools increasingly provide summer internships for their students in legal aid offices, public defenders' offices, and legislators' offices. By giving students this experience, it is possible for law schools to introduce students to experiences in practice which can then be laid alongside theoretical materials.

Changing Practitioner Roles: With the increased use of paraprofessionals, associates-in-arts, and special auxiliary personnel, traditional practitioner roles are gradually changing. This is particularly true in the schools of medicine, nursing, dentistry, and social work. There is already a new medical nurse practitioner role being developed at Pittsburgh and a number of other nursing schools. A medical nurse practitioner program will train nurses to handle preliminary examinations and diagnoses. The University of Pittsburgh School of Nursing is one of the pioneers in the development of the "clinical nurse specialist" whose responsibility will be to work with the total family in health problems which effect the whole family milieu. In a sense, this is analogous to the way in which the family physician used to perform. As these new nursing roles are accepted by physicians, the latter will be enabled to devote more of their time and energies to more acute and demanding patient-care situations. In the School of Dental Medicine, oral hygienists and dental assistants are learning to take on some of the dentists' preliminary diagnostic functions so that dentists can be freed for more specialized diagnostic and treatment work.

Nationally, group practice has already been long established among medical specialists, and dentists are also beginning to move toward this cooperative framework. More practitioners may find themselves practicing in neighborhood clinics, particularly if some kind of national medical plan is adopted. Group practice will probably rely increasingly on the use of auxiliary personnel. At Duke University the medical school has already begun to train physicians' assistants. The tasks to be performed by such assistants include: "screening patients, performing parts of physical examinations, applying and removing casts, assisting at surgery, suturing minor cuts, taking x-rays, and performing laboratory tests outside office hours, assuming some administrative responsibilities, and being available to assist the physician whenever he is on call, day or night."[20] This program will allow students to enter the medical profession who can neither afford the cost nor the time involved in the lengthy medical student education and also reduce the cost of medical services.

Undergraduate Programs in the Professional Schools: Professional training for students at the undergraduate level is another recent national trend. At the University of Pittsburgh the two most recently established undergraduate programs are in the School of Social Work and in the School of Health Related Professions (medical technologist, physical therapist, medical records, child care and development). In both instances, the schools offer training which enables students to provide direct service functions after receiving a bachelors degree. Schools of social work across the nation are moving strongly toward developing undergraduate programs. Students graduating from such programs will enter public welfare agencies, and it is expected that this will have the immediate and long-range effect of upgrading services to welfare clients. The trend toward undergraduate programs also implies that graduate programs will become more specialized and offer more courses for potential administrators and policymakers.

Difficulties Encountered in the Process of Change: As the preceding pages demonstrate, a number of significant changes are taking place in the professional schools. At the same time, change has not occurred very rapidly or without opposition. As the undergraduate level particularly, opportunities for experiential learning are not widespread: "Very few of the 2,300 American institutions of higher education have welcomed social action programs, opportunities for experimental learning or interpersonal learning, or major reorganizations of curricula."[21] The situation is quite different in the professional schools, as has been shown, but for some educators changes even there are far behind where they should be. The reasons offered for the slowness with which change takes place in the professional schools are many:

> Faculty members fall into grooves and find it difficult to accept change either within their own bailiwicks or through sharing budgets with new ventures. Occupational orientation is very strong because a faculty member's reputation in part depends upon the post-graduate placement of his students. Immediate incentives cause the future to be dimly perceived. Persons long accustomed to old models find it difficult to accept new ones; most of the faculty in engineering or business administration know less about computers

> than do their advanced students. Where practitioners are used, as in the clinical part of the medical program, their weighty voice is apt to be on the conservative side. Their interest is in conveying information about existing practice. Because of the way budgets function within a university, it is usually necessary to supply additional funds--not always easily available--to encourage innovations. Behind all of these impediments, there is not infrequently a lack of imaginative leadership within an institution.[22]

Those who favor the very gradual implementation of changes in curricula, however, would insist that the major reason in proceeding with caution rests on the need for proof that alterations really constitute improvements. It is difficult to determine the real extent of change across the country; however, at this point, the general direction in which the schools are moving seems to be clear.

TRENDS IN EXPERIENTIAL LEARNING AT HIGH SCHOOL AND UNDERGRADUATE LEVELS

Educators generally may be more aware of the many innovations in graduate programs than they are of the new developments in experiential learning which are occurring at the high school and collegiate level. What is perhaps particularly significant is the speed and frequency with which changes are occurring at these levels. One observer found that: "Modest initial attempts to escape the boundaries of the classroom--junior year abroad, work-study programs, and correspondence courses--have paved the way for far more ambitious ventures. New York's Empire State College, for example, offers students the opportunity to study at a variety of on- and off-campus institutions but has no campus of its own. Projects such as Britain's Open University have abandoned the classroom altogether in favor of television, radio, and kits of learning materials. Floating colleges aboard ships and travelling colleges that employ a variety of vehicles seek a global curriculum. The New York State Education Department's Regents External Degree Program awards the baccalaureate to anyone who can pass a series of proficiency exams."[23]

Although there are a number of programs developing, it is often difficult to determine what is experiential in any particular program, let alone what the nature of the educational experience is intended to be. Nevertheless, the following examples are used in an attempt to give the reader some impression as to the types of innovative experiments evolving, both at the high school and the collegiate level. Following the examples, an effort is made to look at some of the pros and cons of experiential learning in these programs.

Experiential Learning Trends at the High School Level

Although it is difficult to document the extent of increased use of experiential learning at the high school level, there is evidence these programs are developing. In the immediate vicinity of Pittsburgh, the nationally-sponsored movement of the Junior Achievement Program is one such example. In Pittsburgh, the "Junior Achievement Program provides a 'learning by doing' experience for 2,124 students through the help of executives from 97 area companies."[24] High school students learn how to operate business concerns through their association with executives of various Pittsburgh firms. Dr. William A. Kelly, a professor of business statistics at Robert Morris College, did his doctoral thesis on this program. His study indicated that "students gained in leadership and learned the intricacies of profit and loss, production and distribution as well as a more favorable attitude toward profit and loss enterprises."[25]

Another example of Junior Achievement is the venture of high school students at South Bend, Indiana, where they produce and direct their own weekly television program and earn profits at the same time. Comments from the viewers are very favorable. Both of these examples reflect creative experiential learning situations wherein both school and community are involved in a cooperative venture seen as beneficial to both.

Experiential learning may prove to be beneficial to high school dropouts as well, in instances where the community gives support to the effort. At Dunbar, Pennsylvania, a unique (unique in the sense that it is assumed there is no other group like this in the state or the nation), non-profit organization entitled Concerned of Pennsylvania, Inc. (CPI) set up a special project to assist high school dropouts and slow learners. The group is an ecumenical one sponsored by Catholics, Methodists, and

Presbyterians along with professional and lay persons. Their first project, a housing renovation project, was developed at Smock, Pennsylvania. They purchased four dilapidated houses from Fayette County and "wooed the country's educators with the idea to train special education students."[26] One comment reveals the popularity of the program among the students: "Envy has been gripping former 'normal learning' classmates," according to one student, "a lot of the guys back at the school say they'd like to be in our place."

These examples reveal the interest in such programs of both bright and slow learners. Such experiences are intended to benefit both the learners and the community. It is conceivable that a large scale project involving dropouts in similar learning experiences might benefit communities greatly. The programs also reflect what has long been lacking in American education at the high school level--an opportunity to obtain vocational knowledge toward a career in a trade.

There is also an interesting development in experiential learning for graduating seniors in a number of high schools. "Many high school seniors are taking a year off to explore the outside world through work or travel before going on to college. Most colleges and universities now have established policies for such students. Beloit College has a deferred entrance program called "Option II", and 29 of the entering class are taking advantage of it. Such one year sabbaticals are routine at institutions such as Brown, Radcliffe, Stanford, Hobart, and Amherst. However, large universities have difficulty doing this as budgets are tied to enrollments."[27] It is interesting to note that, "the vast majority of these students who choose deferred entrance do go on to their colleges and reports that they are more mature, stable, self-aware and serious about education."[28] Another similar project is the one operated by Dynamy, Inc. in Worcester, Massachusetts. "It is an experimental project designed to immerse young people in the reality of American city life. Students work in a series of unpaid internships which give them a variety of experience."[29]

The trend for this type of experience is clearly growing and "administrators at Harvard and on other campuses suggest some real changes are in order. Colleges, they say, might encourage travel or work between high school and freshman year, and prospective employers might stop looking for long-term commitments from graduating seniors and offer brief 'internships' instead."[30]

Experiential Trends at the Collegiate Level

Although no attempt is made here to discuss collegiate trends in experiential learning in a representative way, attention is given to selected examples which may indicate future trends on a national level. Both state and federal governments as well as individual colleges have begun to initiate experiential programs on an increasingly larger scale. Examples of these programs are discussed below.

State-Sponsored Programs: A few programs developed at the state governmental level demonstrate a significant investment and support to the development in intern programs. Programs in New Jersey and North Carolina are recent examples of this trend. The New Jersey Interns in Community Service program was "initiated in the Spring of 1967 by Paul N. Ylvisaker, Commissioner of the newly-formed Department of Community Affairs. The program's goal is to relieve the chronic manpower shortage of New Jersey's state and local governments by attracting highly-qualified college students to neglected aspects of public service. The intern experience is designed to increase competence in handling public problems by providing both practical knowledge and an opportunity to observe the workings of government on a first-hand basis."[31]

The popularity of this program, based on a number of evaluative reports, suggests that both students and government benefit a great deal. In the first year, "there were 327 applicants, and by 1970 there were 1,500 applications for 205 assignments."[32] Interns are selected on the basis of academic ability and prior interest and motivation in community work. They are paid for their five-day, 40-hour work week in a variety of jobs throughout New Jersey.

The program also gained respect among the supervisors: "In many cases their association with young activists has changed the attitudes of these officials, made them more receptive to the ideas and ideals of youth, and inspired them to attempt new approaches to increase the effectiveness of their departments."[33] It also appears that the careful matching of supervisor to student has made for a more successful outcome. This aspect is sometimes overlooked in programs that are newly created. The careful selection of both students and supervisors was no doubt a crucial factor in the overall success of the program.

The state of North Carolina has a number of programs designated for the promotion of internship experiences in a variety of service areas. One program, the North Carolina Environmental Intern Program, was initiated by a group of students, state government leaders, and faculty in 1970. The Governor approved the program in the same year, and five state agencies began a small scale program with eleven interns. By the next summer, the program expanded to include 30 interns to work on environmental projects in ten state agencies. In a short time, cooperative ventures were introduced at other levels of service between the government and colleges.

The North Carolina Youth Leadership Development project was developed in cooperation with five colleges and the State Department of Administration. The goal was to promote youth leadership programs in the Appalacian area. "By the Summer of 1970, 73 student interns carried out service projects in 34 public agencies in the Appalacian area. Twenty-six faculty counselors were involved in assisting the interns and over 5,000 young people were provided services by the interns."[34]

The North Carolina Intern Office in conjunction with the School of Law at North Carolina Central University and the Administration Office of the Courts initiated a summer intern program for Solicitor/Defender experiences in 1971. "Twelve law students representing four law schools worked during summer months in the Offices of Solicitors and Public Defenders. Reports of the experience from the law students and attorneys were overwhelmingly positive, and indications are that the program will continue to expand."[35] The findings of the law intern report indicated: "that the internship should last more than three months; that law schools should become more involved with the establishment and operation of internships; and that the experience justifies credit; and recommended that legal agencies with manpower shortages should develop techniques to develop intern programs."[36]

In both examples of state supported intern programs, the value of administrative support and follow-through was of crucial significance. Both programs began very small and expanded as quickly as they could, responding to great numbers of applications. Students also performed a strong role in the initiation of programs and the speed with which programs were implemented runs contrary to the image of bureaucratic "red tape." It is clear, in the instances cited, that experiential learning programs can receive support among cooperative groups of policy-makers who represent different organizational goals.

Other Collegiate Programs: Two recent examples of individual collegiate programs in experiential learning are indicative of the new trends in colleges. The University of Minnesota has developed what it calls the Living-Learning Center. This center is an interdisciplinary service learning unit within the university. "Service learning includes an awareness of theoretical knowledge in relation to experience gained and is seen as a complement rather than a replacement of classroom learning. It is an effort to facilitate off-campus independent study for all students at the university. Credit is not automatically provided. To gain credit, a written project proposal must be presented and carried out."[37] The service areas are classified as follows: Public Interest; With Children; With Youth People; In Social Service; Miscellany. Within each of these areas 18 to 20 courses are offered which involve research projects, teaching activities, political concerns, etc., demonstrating a well-organized and interesting program of experiential opportunities from which students can select.

The first institution of higher education that became owned and operated by blacks, Wilberforce University, at Dayton, Ohio, has begun a cooperative education program for its students. In this program students spend part of the school year in the classroom and part of it in industry where they are paid for the experience. Interestingly enough, the students of the school, "have not demanded academic credit for outside work, nor have they asked for a reduced number of credits required for graduation."[38] This implies that the experience in learning is valued in and of itself.

Although the extent to which the above examples represent a general trend cannot be determined, it seems probable that other universities around the nation are also moving in this direction. In an interesting innovation, several universities have joined in an effort to implement a new concept in education: the University Without Walls. Part of the implementation of the program involves wide use of experiential learning. The University Without Walls is a program of the Union for Experimenting Colleges and Universities, an association of 25 institutions[39] that have joined to encourage research and experimentation in higher education. Headquarters are at Antioch College. This program began with a "seed money grant of $415,000 from the United States Office of Education. The Ford Foundation added $400,000 in supplementary funding. More recently, UNESCO contributed $10,000 to begin plans for a UWW abroad."[40]

There have been a number of influences that have encouraged the development of this innovative educational program. "New groups of students such as older persons, minority groups, and low-income groups seek college degrees. These groups often require more flexible and individualized programs. The financial plight of colleges and universities has grown increasingly serious, requiring them to find ways to operate under more stringent conditions. Pressing social problems raise many questions about what a college ought to be, who it should serve, what should be taught, and how it might best be taught."[41]

The University Without Walls seeks alternatives to these problems by developing highly-individualized and flexible programs of learning.

In doing so, it places confidence in the ability of the student to learn on his own, while still providing close contact between student and teacher. "It redefines the role of the teacher as a facilitator and co-participant in the planning and design of the student's learning experience, and it seeks, through its inclusion of a new mix of age range (16 to 60 and older) to build a new dialogue and trust between younger and older persons."[42]

By Fall of 1971, 3,000 individuals were enrolled in all the colleges involved. Most institutions began their programs with small groups of 35-50 students. Each college determines how its program should be run, and there have emerged a number of different learning guides for students of these programs. A wide variety of students have enrolled, and some of the following excerpts indicate the nature of the motivation to enter such a program:

> A 26-year old, married playwright: "In the arts, the most important kind of knowledge is doing knowledge. The artist must experience in order to be an artist--artistic education must be process-oriented not product centered, and the process must also be flexible and totally experimental in order to meet educational needs. One must have the right to fail without failing out of school. This is the kind of system an artist can thrive in."[43]
>
> A profile of a mother and housewife in her early thirties: "She left school ten or twelve years ago to marry. Her impetus for going back to school was a deep dissatisfaction with her children's public school. Together with several other friends and neighbors, she helped found a free school in a predominantly white, working class area of the southwest side of Chicago. She will be completing her B.A. and requirements for city and state certification while working at this school."[44]

> "Formal schooling ended for me at 14, when I became a commercial radio operator during World War I. I read voraciously for six years at sea--English, German, French. Then a few years on newspapers, a radio review of books, music and art from 1923-1926. An appropriate academic background seems an essential prerequisite (a) to do a book on art in architecture, and (b) to teach others understanding and enjoyment in the arts, also to organize and check on more than 50 years of such enjoyment. At my age (71), any long-range program must be compressed and accelerated."[45]

Among the organizing concepts of this educational program is the emphasis on a wide range of resources for teaching and learning: "regular course work as desirable or needed; internships; apprenticeships, and field experiences; independent study and individual and group projects; field seminars and use of adjunct faculty (persons outside the college); travel in this country and abroad; and programmed material, cassettes and other technologically aided materials."[46] Such resources for learning are developed by each college and packaged in a pamphlet entitled "Inventory of Learning Resources."

Although it is too early to assess the future of this program, a number of developments have already occurred. "'Spin offs' include the development of UWW programs designed for the rehabilitation of drug addicts and alcoholics, for helping convicts in penal institutions, and for aiding paraprofessionals seeking advancement. The UWW is being looked on as a model for improved programs for teacher education and for adaptation to high school programs. Some 40 institutions of higher education have expressed interest in joining the UWW, and plans for UWW Regional Centers in some five or six areas of the country are underway. Considerable progress has been made toward a research design for evaluation, and full scale research is expected to begin in the Fall of 1972 as new students enter UWW institutions."[47]

If financial savings can actually be documented in such a program, it may very well be that this program has great promise. Savings would be a result of student use of non-classroom resources, "such as internships and field experiences, and adjunct faculty members from business, industry, government, and community agencies. The teaching role allows him to work with a large number of students in an advising and planning capacity, yet with individualized instruction."[48] The research presently underway should provide a clearer answer in regard to the nature of actual operating costs.

Federal Program--University Year for Action: On July 1, 1971, the University Year for Action program was launched by ACTION (Vista, Peace Corps, Foster Grandparents, Retired Senior Volunteer Program, Service Corps of Retired Executives, Active Corps of Executives). The purpose of the University Year for Action program is to offer students an opportunity to devote a year to community service while staying in school and continuing to earn academic credits toward graduation. Colleges and universities who participate[49] acknowledge the educational value of this experience and agree to a full or partial year's credit to students who participate. Sometimes a combination of independent study and regular courses are included in the one year program.

A major departure from the Vista program is the granting of college credit for a full-time job in the poverty community with the availability of university resources. ACTION is the primary source of funding for the university and the student. Each student volunteer receives an average of $200.00 per month to cover his living expenses. The program is expensive. Further breakdown of costs indicates: $400 to train the student; $500 for ACTION's administrative costs; $3,100 as the student's living allowance; and $2,000 to the university to cover the administrative costs of managing this program--a total of $6,000 per student volunteer. This emphasizes once more the fact that experiential programs are very expensive, and without federal or other governmental support it is difficult to envision how a program such as this could be implemented.

The report on ACTION reveals some interesting trends which are important to note. For example, volunteer activities for the disadvantaged are distributed in the following way: "Approximately 29 per cent are in education programs; 23 per cent in community planning; 16 per cent in health and related programs; 13 per cent in administration of justice; and 5 per cent in manpower and job development."[50] About half of the 500 volunteers engaged in the program have had previous volunteer experience, and about one-third have had first-hand experiences with the problems they are dealing with in ghettos or other poverty areas.[51] It is not clear why so many volunteers are "repeaters," but it does seem that many student volunteers are familiar with and aware of problems in these areas and able to communicate with the residents. The volunteer program students are distributed as follows: 53 per cent are white; 29 per cent black, 6 per cent Spanish-speaking, and 3 per cent Indian.

The ACTION program in its initial stage appears to offer students an opportunity to learn and serve in a variety of ways which they find meaningful. The success of the program, however, will depend very much upon the degree of cooperation between ACTION, university administrators, and community resource people who provide experiential sites. It remains to be seen whether or not adequate administrative support can be maintained amidst this complex cooperative arrangement. The program does provide universities with opportunities to utilize funds and personnel from ACTION; however, adequate administrative and faculty support is crucial to the implementation of the program.

Critical Issues of Experiential Learning in Experimental Programs

Pressures for change including the academic reform movement have persuaded university administrators to adopt new experiential programs. However, innovators do not always consider the problems in administering programs so that they can work effectively within the traditional boundaries of university administration. Herbert London, Director of Experimental Programs at New York University, makes a number of astute comments concerning some of the newer programs, and some of his major criticisms are highlighted here.

One of the central criticisms that London raises is the issue of quality. He contends that many universities will become interested in the University Without Walls program merely because it will "raise tuition revenue, and at the same time attract new money to support the experiment. Quality becomes a secondary consideration."[52] He seriously questions the university movement into the community when he states, "If community residents will be planning student programs, why have professors at all?"[53] In short, he believes that if experiments are to be conducted they must adhere to accepted academic standards. However, it is sometimes difficult to determine how one can apply former standards to experiential situations that do not fit the traditional criteria. A number of questions arise around the issue of deciding where to give credit and how much. The following examples illustrate this problem:

> At one eastern college, well-known for its experimental bent, a student recently obtained a degree for bee-keeping. Her father, a bee-keeper, was her mentor. Another student at a West Coast college described his internship as 'hanging out with the guys.' He means the guys in a drug-detoxification program that he entered one year before starting his college 'education' and that he continued for credit after enrolling in UWW.[54]

In another instance one sees the familiar problems of the notion of "cheap student labor." "Students took jobs as hospital attendants during a labor dispute and became unwitting union busters to their later dismay."[55] Furthermore, London points out that some students may not "learn" anything even from the most extraordinary experience, and he notes: "As George Bernard Shaw said, 'You can take an ass round the world and it won't become a horse.'"[56]

On the other hand, London commends the UWW program at Chicago State because, he believes, it has adequate built in controls and good sense from its administrators. In the last analysis, London does not believe that experiential (or experimental) education will change the character of the university since it serves only a small number of students.

James Cass, a contributor to the same issue of Saturday Review, is a bit more positive about the possibilities of experiential education even though he is aware of all the problems that London has mentioned. He believes one of the positive outcomes is that many persons who previously were denied the opportunity to enter college (or were uncomfortable in the higher education process) can have the chance to do so in experimental programs. For example, "Vermont Regional Community College is designed primarily to serve the urban poor. In New York City, the College for Human Services reaches out to low-income urban adults. In Washington

State, Whatcom (County) Community College is committed to providing relevant education for minorities, returning veterans, the middle-aged, and public school dropouts."[57] He also points out that a number of the new programs are sparked by "the accumulating evidence that very often there is little correlation between academic learning and adult competence on the job."[58] Furthermore, "the experimental college movement is, at least in part, a direct response to the fundamental criticisms of traditional higher education voiced in recent years by such prestigious groups as the Carnegie Commission on Higher Education and the Assembly on University Goals and Governance."[59]

Malcolm Knowles raises questions concerning the education of undergraduate students based on his experience and research in the field of adult education. "After ten years of experience, our learnings from this experiment in group self-directed learning are based largely on impressionistic data--a base typical in the first phases of action research. Our impressions are supported by a growing volume of student reports collected through course evaluation procedures. First, it is overwhelmingly clear that undergraduates in our American colleges do not, on the whole, learn the skills of self-directed inquiry. They enter graduate school still dependent on their teacher to diagnose their needs for learning, to formulate their learning-objectives for them, to tell them what they need to know, and then to evaluate what they have learned. They have not learned the value of their own experience as a resource for learning, and they have not learned the techniques for learning from their experience. But it seems equally clear from our ten years of experience that students can learn to be self-directed learners if they are plunged into educational activities that require it, if they are well-coached in the required skills, and if they are supported by a respectful environment."[60]

Concern, then, is expressed about the kind of student who should be enrolled in the experiential program. If the student is already self-directed in his learning, he will probably get more out of experiential learning. Like Knowles, London feels that, "in most cases this does not include the average seventeen-year-old who has just graduated from high school. It probably also excludes the ritualist who is at the university because of peer-group or parental pressure. And it certainly does not include those who seek a college degree only as the 'calling card' for a better job."[61] These educators continually emphasize the belief that many, if not most, undergraduates are indeed without the skills and motivation to profit from an experiential situation. This is an important point to consider, for selection procedures could indeed spell success or failure for the movement as a whole.

The overall underlying conflicts concerning experimental learning, then, seem to revolve around the issue of what a university is and how it ought to function. Experiential innovators assume that the school exists primarily for the educational goals of the student, with as much variety and flexibility in the selection of his courses as possible. The more traditional educators argue that the university is imbued with the responsibility to influence the student's intellectual and social development. If this responsibility is taken away, then the institution no longer has a reason to exist.

SUMMARY

The historical development and resulting conflicts in our universities, as well as the fact that many of our students feel that they are "underdeveloped" in the skills of living and working, make for confusion as to what the goals of a university should be. Changes that have occurred gradually have apparently "caught up" with higher education. Along side these forces was the period of the 60's in which the conflicts of war and peace merged with pressing social problems to create significant and previously unfelt demands upon the universities. The results of this aftermath seem to indicate that the universities, particularly the professional schools, did respond to the pressures for greater social concern. The response took the form of a number of curriculum changes in the professional schools and in experiential learning itself.

Professional schools have often been charged with being conservative and slow to change. Yet during the last few years, traditions and goals of training have been modified in many ways. Concepts of quality and evaluation are being examined in light of new experiential learning situations, and also the changing roles of faculty and students. The problem of financing experiential learning is a crucial issue, and it may be that universities will increasingly have to seek assistance from a variety of governmental sources in order to continue expansion of these programs.

Before embarking upon experimental programs with a major component of experiential learning, it may be helpful for administrative innovators to review the contributions of professional schools to the development of experiential learning. Of particular importance are such recent changes as: greater community concern; the emphasis on problem-solving; interdisciplinary teaching; flexibility in career objectives; changing practitioner roles; the introduction of professional schools at the undergraduate level.

What is happening in these areas reflects a considerable amount of change occurring in professional schools. On the other hand, there are a number of obstacles in bringing about new programs in experiential learning at the undergraduate level. Departmental restrictions in terms of tightened budgets, as well as reliance on traditional educational models, are often impediments to change in the development of experiential programs. Nevertheless, many innovative experiential programs have already begun at the undergraduate and high school level. Some proponents of experiential learning even advise that experiential learning should be developed at the high school level more than at the undergraduate level. In any case, some programs do exist and at undergraduate and high school levels this trend is likely to continue. At what speed and in what form is not easily determined.

Another interesting development is the cooperation and collaboration being achieved between state governments and universities in setting up experiential programs. New Jersey and North Carolina have been developing such programs since 1969, and other states such as Georgia and Kentucky and Rhode Island have promoted impressive intern programs. Collaborative efforts between several universities such as that which occurs in "University Without Walls" is another significant development in the movement away from traditional models and former assumptions about what the university represents. The federal government, through ACTION, has also joined in in a way that offers institutions of higher education subsidies for implementing the program, providing remuneration for the student and money for administrative costs incurred by the university.

One critical issue confronting experiential learning in the newer programs is the problem of developing and determining standards that are acceptable in light of traditional academic concerns for quality. However, this is difficult to achieve since previous methods of assessing performance cannot always be used. Related to this is the thorny issue of whether to provide credit in such situations and, if so, how much credit. This can become a major source of conflict and confusion for administrators of new experiential programs. On the other hand, many are questioning the total reliance on traditional models. This issue was raised in the reports from the Carnegie Commission on Higher Education and in the Assembly on Community Goals and Governance. As the conflicts and issues become clearer, perhaps those who will have to deal with these problems will have a better understanding of the complex concerns in experiential learning.

Administrators are going to have to come to terms, then, with experiential learning. How they go about determining their action will be a crucial factor in the outcome. Whether they remain remote from student-faculty opinion and consultation and whether they consider the value of this kind of innovation will depend on their philosophy as educators-administrators. Furthermore, if the goals of university education are as uncertain and confusing as many educators claim, then it may well be that it is the department chairmen, key faculty, and interested students, that will determine the direction of experiential education at the undergraduate level.

The chairman's reaction and subsequent decision-making on new experiential programs will be a reflection of his understanding of the pressures for change, the reasons for the pressures, and whether these will be acceptable to his faculty. Such pressures may represent wishes for reform on the part of students and/or faculty, or a response to the confusing goal issues not clearly established or thought out. The failure to understand these various forces and issues may also mean the failure of any true dialogue and discussion of them, regardless of financial considerations which may be used as an excuse for not considering such programs in the first place.

The word "experimental" is used a great deal and for sake of clarity, it is important to recognize that experimental does not necessarily imply experiential. An experimental program may provide technological or administrative innovations to promote learning, but are not necessarily experiential learning situations. Some experimental programs such as the University Without Walls include the acceptance of experiential learning for credit, others, however, do not. Experiential learning in itself also has to be differentiated so as to recognize that different educational needs can be fulfilled in a variety of ways. Such differentiation might also be viewed in terms of various goals which, in turn, reflect various needs such as: to relieve manpower shortages in governmental or social agencies; to promote youth leadership; to relate class learning to experiential learning; to alleviate financial plights through use of students; to set up flexible programs to meet needs of groups of individuals not traditionally served by colleges; to offer various services to the community. Thus, an awareness of various levels or goals is also needed in order to acknowledge the question concerning what one is trying to achieve in such a program.

From the administrative point of view, there are three major areas of concern to ponder over when discussing the newly developed programs by participants at the recent Montpelier Conference on Experimental Colleges:[62]

> (1) The relationship of students, faculty, and administration is a learning environment in which traditional roles of authority have been profoundly modified, if not rejected.
>
> (2) To define what consititutes a "Quality" educational program in a situation in which the specific needs and desires of the student take precedence over traditional courses, credits, and academic standards.
>
> (3) Devising means for accurately measuring and evaluating learning that takes place in unconventional ways and non-traditional places.[63]

Although the participants in this conference did not find answers, they have at least begun to state the issues to which higher education must address itself when considering these new programs. That many universities are considering these programs there is no doubt. Recently, it was announced by the UWW that 55 more universities had applied for participation in the program. Thus, while the issue of community-university involvement may continue as an intellectual debate on many campuses, it is becoming an issue of the past on many others.

Another means of introducing experiential learning and which has been touched upon only briefly in this paper, is the use of simulation games. An increasing number of resource materials are available for instructors who wish to use this approach. Although the approach is not a real life situation, it can be very close to the actual experience and adds other dimensions as well. Such games have been devised in several areas and are now being used in manager training by several business schools and corporations. One of the major contributions of the games process is that simulation games can condense or expand time which is not possible in the actual experience. It is conceivable that simulation and actual practice could be combined to produce increased awareness of processes and concepts with less lengthy experiential time spend in the "field".

Recognition should also be given to the multi-dimensional quality of experiential learning. Such learning is not only for the benefit of the student because the community also receives benefits, as does the university for giving the service. At the same time, professional schools have to be aware of maintaining a balance between teaching, research, and service. The point is, that these three components are not always in balance, and thus, can cause conflict and confusion.

Looking at it from the student's point of view, the student who returns to the university after several years of work experience may add considerable to the university's knowledge as he relates it through papers, and as he synthesizes his academic work and experience. Students entering the university after World War II made this type of contribution. It is likely that the mid-career person or the changed career person will become a more common occurrence as time goes on. There should be some valid ways to give recognition to their contributions.

The issues of experiential learning are indeed complex and provide many interesting potentialities for education in general, as well as for higher education. On the other hand, many educators are unwilling to change styles of learning because "Few studies have been able to demonstrate that student instruction resulted in greater mastery of the subject matter. These studies suggest that the acquisition of knowledge is largely unaffected by the use of either directive or non-directive techniques in the classroom. Student reaction is just as mixed."[64] Perhaps the dilemma of experiential learning can best be illustrated in the following excerpt:

> A junior high school student was discussing her English assignment with her father. Her job, as she explained it, was to read several short stories and explain the meaning of each story and its title. She felt she had done this rather successfully except for one story, Clothe the Naked, by Dorothy Parker. Here she had some difficulty and needed to call on her father, the fount of knowledge and funds. After her father read the story, he suggested that perhaps Miss Parker had a different kind of "knowing" in mind when she wrote the story. "Fine," said the daughter, "explain it to me." "Words fail me," said the father. "I suppose one can say the story is better understood than explained." "That's fine," she said, "but what do I tell my teacher?" "Perhaps," said the father, "you could explain that not all knowing is of the one-plus-one-equals two variety or that being able to explain actions and events is not the same as understanding them in an experiential sense." "Oh, well," said the daughter, "I guess you don't know what the story means either."[65]

The above example points out the problem of communicating knowledge that has to be experienced in order to be understood. It also signifies that a good deal of such learning is highly intuitive and therefore difficult to assess. Perhaps we need to assist people in communicating this kind of knowledge in order to understand it better, for much of decision-making, though many administrators might deny it, relies on intuitive hunches or guesses.

Whether or not experiential learning becomes a larger component of higher education remains to be seen. On the other hand, those who argue that it might better take place at the high school levels may overlook the problems of administration at that level. "The system also isn't working because it has bred its own line of successors. Teachers have become principals, and principals have become superintendents. Many administrations have become characterized by empire building, rigid controls, and highly protective systems. In many systems the superintendent has become the personification of the status quo."[66]

The future of these programs, then, appears to rest with higher education to a greater degree than may be recognized at the moment. Perhaps sound decisions can be based upon the evaluative material of these newer experiential programs. It will be very interesting to note this trend in future years but for many, the future years are already here.

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PART II

A DESCRIPTIVE INVENTORY OF SELECTED EXPERIENTIAL LEARNING PROGRAMS AT THE UNIVERSITY OF PITTSBURGH

by

Michael Sugg

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INTRODUCTION

The primary purpose of the case study at the University of Pittsburgh was to obtain a representative inventory of the current status of experiential learning programs at the University of Pittsburgh. The major focus is on the professional schools, although there was also a questionnaire survey of the College of Arts and Sciences. The case study is offered as a companion piece to a more general overview of national trends.*

The case study was designed to explore and describe ongoing programs with particular attention to major changes in programs, major problems encountered, and perceived future changes and advantages. By collecting this material in one relatively concise document, it was hoped that a useful service could be performed for administrators, faculty members, and students who are concerned with experiential learning. By receiving information about other schools, it seemed possible that ways would be opened for an exchange of information about programs between involved schools and departments.

What is meant by the concept "experiential learning" has been described in Part I of this report, but, for the sake of clarity, the definition is repeated here. For the purposes of the study, experiential learning is:

(a) a learning experience which takes place outside the classroom;
(b) but within the context and sponsorship of an academic department;
(c) the purpose of which is to include in the curriculum a "learning by doing" component to supplement the students' acquisition of academic skills;

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*Michael Sugg, Explorations in Experiential Learning, Part I, Experiential Learning in Contemporary Education, Office of the Secretary, University-Urban Interface Program, 1972.

(d) and entails a clearly identifiable learning experience by the above criteria of at least two months cumulative duration.

Method of Study: Lengthy, largely open-ended interviews were conducted with at least three and, in the case of larger schools, as many as eight faculty members in each of nine professional schools. The investigator took detailed notes during the interviews which he supplemented from memory immediately afterwards. In addition, where it was possible for personnel in the schools to provide detailed statistics, questionnaire forms were supplied which were filled in and returned to the investigator. For those schools or programs within schools on which statistics were available, a brief resume of important information is presented in the introduction of each of the nine chapters devoted to the schools investigated. A questionnaire was sent to each of the departments of the Arts and Sciences. Thirty-two questionnaires were sent out to chairmen, and twenty-three (72 per cent) were returned and completed. The information collected from this survey is presented in a separate chapter on the Arts and Sciences.

The information presented in the following nine chapters is distilled largely from the interviews with key faculty members. In the process of collating the information collected, the investigator has had, to some extent, to use his own discretion about how to best present the extensive material in a reasonably concise fashion. Every effort was made to produce a report which faithfully mirrored what was learned in the interviews; however, any omissions or errors which do occur must be considered the responsibility of the investigator. Following the nine chapters on the professional schools, a chapter is included on the Arts and Sciences, based on the questionnaire data and a few selected interviews in departments where experiential learning seemed to be fairly well developed. The final chapter constitutes a summary of the findings in the case study as a whole.

THE SCHOOL OF MEDICINE

Introduction

More than 450 medical students and over 60 graduate students are enrolled in the medical school's 18 clinical and basic science departments and seven programs in graduate medicine. The school is very interested in finding ways to revise its curriculum and is investigating the potential of innovations such as the use of audio-visual materials, electronic teaching devices, and computer-aided study.

The experiential component of medical schools such as the clinical experience (first four years of medical school), the internship (one year following the fourth year of medical school), and the residency (three years of specialization), reflect the heavy emphasis on practice as part of the educational curriculum. To some extent, medical schools find less conflict between academic tradition and community involvement than other departments and schools, since the nature of medical practice has always included a community component. Nevertheless, new methods and approaches in community medicine and community psychiatry are also providing medical students with exposure to more complex urban health problems.

In an effort to obtain a current picture of experiential learning in the University of Pittsburgh medical school, three faculty members were interviewed. It was not possible to conduct more interviews or collect detailed statistics in the medical school because of the very heavy demands on faculty time. The interviewer therefore chose to focus on: (1) obtaining a general description of experiential learning in the medical school, and (2) obtaining descriptions of two departments specializing in community aspects of medical care.

Major Changes in Program

Curriculum Changes: A few changes in curriculum are gradually emerging. This signifies a trend toward shortening the time required for an education in medicine and appears to indicate greater flexibility in the educational program as well.

Experiential Changes: The clinical experience of the medical student has not changed drastically, although some new ways have been introduced.

The Student Preceptorship, a program designed and initiated by medical students two years ago with the cooperation of the Division of Community Medicine and the Regional Medical Program, is designed to give students an opportunity during the summers following their first and second years in medical school, to gain experience in family practice and community medicine by entering into a preceptorship relationship with a physician in family practice and on the staff of a community hospital, preferrably in a small or outlying community. One of the main purposes of the program is to interest students in family and community medicine, and to make them aware of the need for physicians in certain areas, and the rewards to be gained from practicing in these areas, so that eventually the distribution of physicians throughout the state will be favorably effected.

Most medical students now begin actual work with patients by the end of the second year rather than, as formerly, during the beginning of the third year. This work is termed the clinical clerkship. The majority of students currently choose to have their internships in teaching hospitals affiliated with medical schools. Formerly, students interned in hospitals not specifically designed for teaching. About three-quarters of the clinical (experiential) instructors are now faculty whereas formerly private practitioners were used for this part of medical teaching. Nearly all faculty at the medical school are involved in clinical instruction of medical students.

Major Problems Encountered

Financial: Two-thirds of the students in the medical school are supplied with scholarships and loans to complete their medical education. However, since some medical students have family responsibilities, and the cost of living has risen, there is some pressure to remunerate all medical students. Whether or not this will come about, however, is still a matter of controversy.

Instruction: Increasingly, the enrollment of the medical school is larger. However, there are not enough faculty to train students. The problem then is to locate preceptors who have the time and interest to do this. At present, the University recruits about twenty-five percent of its clinical instructors from the ranks of the private practitioner.

Placement: At the clinical level, the intern and resident experience are, in a very real sense, controlled by the kind of patient care required. The intern experience, which is a year long, is assumed to cover a wide variety of medical situations, and this is usually the case. However, in some settings, certain specialities are over-emphasized or under-emphasized due to the nature of the program at that hospital or medical school.

Perceived Future Changes and Advantages

Although the experiential components of medical training are essentially the same, there is a gradual but growing trend toward a more flexible as well as a less lengthy educational process. There is evidence of more relaxed pre-medical requirements in some science areas. In medical school, lab courses are being reduced in favor of overall scientific methodology courses aimed at problem-solving approaches. The internship is no longer necessarily required, especially for those who wish to enter administrative or research careers. The changes now in process will result in an overall reduction of educational time spent by medical students. Thus, instead of spending four years of pre-medical, four years of medical school, and four years of internship and residency, there will be a gradual shift to a 3-3-3 combination--shortening the total length by three years.

In addition to the structural changes mentioned above, medical students will be provided with less compartmentalization. "Education in ethics, philosophy, sociology, management, politics, economics, should be continued not only in medical school, but in graduate medical education."[1] There will be increasing emphasis on working together with other professionals. "The educational program at the graduate medical education level should include opportunities for the nurse, the social worker, the physician's assistant and the physician to work together in that environment which might be characterized as a model of (some part of) the health care delivery system. They should learn to work together by learning and training together."[2]

The changes will no doubt eventually affect the traditional role of physicians in some respects, especially if auxiliary nursing personnel will be used. However, it is difficult to envision how so much can be learned in a shortened length of time. It may be that pre-medical training will be more balanced in both science and the arts to accomplish the overall aims of medical education.

Medical Specialties with a Community-Medical Emphasis

As stated earlier, these specialties were chosen for study as they represent explicit course and experiential components related to the community-university interface. This is not to say that other departments of medicine are not involved with the community; traditionally, they always have been. Nevertheless, these more recent specialties represent interesting and sometimes innovative responses to medical problems, perspectives, viewed from social, psychological, group and political process in addition to the physiological aspects of medicine.

Department of Community Medicine

The community medicine specialty has been in existence at the University of Pittsburgh School of Medicine for 12 years. By definition, community medicine is concerned with evaluation and solution of health problems, of populations rather than individuals. The tools of evaluation include epidemiology, statistics, health surveys and screening, cost accounting, etc. The interventions include health education, immunization, organization and allocation of health resources, nutrition, etc. A brief listing of current student projects reveals a variety of interests and concerns: research into the politics and social structure of medicine; evaluation of methadone in treatment of heroin addiction; development of health programs to meet medical needs of Navajo Indians in Arizona. A few of the investigative projects being conducted jointly by faculty and students may be listed here: Description of Emergency Care Services, Facilities, Use and Needs in Allegheny County; Estimate and Assessment of Disease in a Defined Urban Population; Planning Community Health Services for Special Needs; Use of the Telephone to Provide Health Supervision to Low Income Populations; Evaluation of the Effectiveness of Physician Post-Graduate

Education; Evaluation of the Effectiveness of the Maternal Infant Care Program in Allegheny County.

During their course work, a number of community experiences are available for the student of community medicine. In one program, students become involved in comprehensive and preventative aspects of child care which provides the student with broad experience in the care of children with acute episodic illnesses, certain chronic diseases, and other problems commonly encountered in pediatric practice. Visits to the home and to community agencies are sometimes made to broaden the student's acquaintance with the problems of childhood. Clerkships in public health are available on the Navajo Reservation in Arizona. Students live in government quarters at Fort Defiance and work under the supervision of U.S. Public Health physicians, who have appointments as clerical faculty members in the School of Medicine. It is interesting to note that these physicians are University of Pittsburgh medical school graduates who themselves participated in the program as students. Emphasis is placed on health program planning and implementation. Students also study and observe problems and techniques associated with organization of health care services for a low-income inner-city community, delivery of health care to it and evaluation of program effectiveness. The School of Medicine provides complete health care to this 5,000 person community in a modern health center located in the community. A multi-disciplinary group provides the student with an acquaintance of how non-physician personnel can extend the effectiveness of a physician in delivering health care.

Quantitative approaches in clinical and community medicine are also taught. Students can investigate in depth specific areas such as sampling and survey techniques, bioassay, clinical therapeutic trials, computer diagnosis and mathematical models of physiological functions. Students also are able to gain knowledge of the organization and delivery of health services through the Health Center administrative and planning sections, the Regional Medical Program, the Allegheny County Medical Society, the Allegheny County Health Department, and other community agencies.

At the clinical experience level there is an emphasis on problem-solving and opportunities with real life situations are provided to accomplish this end. However, the major change is the increasing shift of emphasis from a strictly case method of study to a recognition of principles within a given community health process.

Thus, community medicine, a new specialty in medicine, is aimed at an analysis of community medical problems and at finding ways to meet medical needs of groups that are not receiving adequate medical attention at this time. Practioners of community medicine, though few in number, may be found in government-related programs (federally-supported) that attempt to diagnose community medical needs and make it possible for better allocation of medical resources to communities.

Department of Social/Community Psychiatry

Social and community psychiatry is taught to medical students, interns, and residents at Western Psychiatric Institute and Clinic (WPIC). Social psychiatry emphasizes research related to the social aspects of an individual, group or community. Community psychiatry pertains to the application of the principles derived from social psychiatry, through the techniques of consultation, collaboration, and conjoint planning for mental health. The programs of social psychiatry and community psychiatry are closely related to the Community Mental Health and Retardation

Program at WPIC, which, in turn, provides educational and experiential learning for medical students, teaching fellows in psychiatry and child psychiatry, nurses at the B.A. and M.A. level, as well as students in psychology and social work. Pre- and post-doctoral students from the behavioral sciences are also involved in these programs.

Medical students in the four-year medical program may choose community psychiatry as one of their electives. The clinical clerkship experience lasts for six weeks. During this time the medical student is exposed to a number of aspects of social and community psychiatry through field visits, interdisciplinary conferences, sitting in on consulting teams, home visits with caseworkers, etc.

In Pennsylvania, a traditional internship is no longer required for physicians entering psychiatry. During the first of the three years of training, the medical school graduate spends six months in psychiatry and six months in medicine. The psychiatric training program itself is more flexible, with the third year being entirely elective. An additional year of training in social psychiatry is available on a fellowship basis.

All psychiatric residents are exposed to community psychiatry through seminars in the first year, and assignment to community teams in the third year.

Social and community psychiatry have their roots in psychiatry, public health, anthropology, sociology, and psychoanalysis. Individual psychology, psychopathology, group dynamics, epidemiology, and cultural and social phenomena all contribute to the social psychiatric conceptualizations, and the formulations upon which community psychiatry draws. Thus, the training program rests upon the collaboration of representatives of a number of disciplines.

It is hoped that as the social and community psychiatry programs gain definition and strength at the intern and residency training levels, additional practical experience will be developed for medical students as well.

THE SCHOOL OF NURSING

Introduction

The School of Nursing offers academic programs ranging from the baccalaureate through the doctoral degrees. In the Fall Term, 1972 there were 875[3] students enrolled, 193 of whom were matriculated at the graduate level. In addition to the undergraduate degree program, the school offers clinical master's degrees in the areas of medical-surgical, maternal, and psychiatric-mental health nursing as well as nursing care of children. Three doctoral programs are available: in Pediatric Nursing, Maternity Nursing, and Psychiatric-Mental Health Nursing.

Five departments exist within the school: General Nursing, Medical-Surgical Nursing, Obstetrical Nursing, Pediatric Nursing, and Psychiatric-Mental Health Nursing. A faculty of 112 full-time and 5 part-time members provide instruction and guidance to the expanding student enrollment which has quadrupled in the past five years.

Nursing has long been recognized as a profession in which experiential learning has been an essential element in the educational preparation. Until rather recently the emphasis has been placed upon settings which provide nursing care to acutely ill patients, e.g., general hospitals. Students in this school, for example, contributed 774,536 hours of direct nursing care in 1971 at Presbyterian-University Hospital alone, one of seven hospitals which provide opportunities for these experiences.

As new trends become noticeable in health care in our society, new experiential learning is incorporated into the nursing programs. The aging population has resulted in the utilization of extended care facilities.

Current emphasis on health promotion and maintenance has led to consideration of the expanded role of the nurse with outreach into the community through clinics, out-patient facilities in urban and rural settings, satellite centers of hospitals, and a whole host of community organizations. Mental health programs are much more community-oriented than was previously the case.

Positions have been taken by both of the national nursing organizations concerning the role of the nurse. In the 1967 annual report the National League for Nursing is stated, "The collaborative efforts of nursing must extend far and deep into the community so that there will be an unrelenting voice in planning for health services." The American Nurses Association in its official journal supports the concept of an extended scope of nursing practice as set forth by an interdisciplinary committee constituted by Elliot L. Richardson, Secretary of Health, Education, and Welfare.[4] The Preface to the original document states,

> We believe that the future of nursing must encompass a substantially larger place within the community of the health professions. Moreover, we believe that extending the scope of nursing practice is essential if this Nation is to achieve the goal of equal access to health services for all its citizens.[5]

Another force in nursing education with implications for experiential learning is the report coming out of the National Commission for the Study of Nursing and Nursing Education.[6] One recommendation of this study suggests that two essentially related but differing career patterns be developed for nursing practice:

(a) episodic, which is essentially curative and restorative and is usually provided in hospitals or in-patient facilities, and

(b) distributive, which is more oriented to health maintenance and disease prevention, and is usually provided in the community or emergent institutional settings.

This recommendation in its present form is questioned by members of an NLN Task Force, who believe that it needs further study and possibly experimentation on a small scale prior to widespread adoption.

Major Changes in Program

Curriculum Changes: About five years ago the nursing curriculum was changed. Prior to that a separate program existed for Registered Nurse students working toward a bachelor's degree who had received their basic preparation in hospital diploma programs. In the new program all students take the same courses; however, opportunities do exist to determine knowledge and skill brought to the program by these students in order to individualize their requirements.

Some changes incorporated into the new curriculum are presented. Community health concepts are introduced early in the program and then integrated throughout in connection with clinical courses. Deviating from a medically-oriented model of organizing content around body systems, signs and symptoms, and treatment, a newer theoretical framework utilizes the nursing process. Students learn how to observe and interpret patient behavior objectively and subjectively, interpret laboratory findings, design individualized plans of nursing care, carry out a therapeutic role, and evaluate the nursing care. This model is applied to patients ranging widely in age, medical diagnosis, and location.

While still involved in actually carrying out certain techniques and procedures, a nurse today is taught to interact therapeutically with those needing nursing care. For this reason, psycho-social concepts are integrated throughout. The nurse learns to teach effectively and to provide leadership to other members of the nursing team.

Experiential Changes: Experiential learning is valued as highly today in nursing as it has been in the past. Differences exist in how these experiences are arranged and provided. The educational institution arranges with each health care agency for the nature, time, and quantity of experiences. In some cases formal contracts are drawn up. Instructors from the school accompany the students, preparing them in advance and helping them to evaluate their experience afterwards. Very little responsibility is placed on personnel of the agency for the educational experience.

Years ago many schools stressed the service aspect of experiential learning. Due to accreditation standards and other changes in our society, there has been increasing emphasis upon the educational aspect, even in hospital schools.

Newer kinds of experiences are being provided today, such as visits to residents of apartment buildings designed for the elderly, to community mental health centers and to primary care centers.

Practice Changes: Across the nation changes have been occurring in the traditional role of the nurse. Increasing knowledge about and complexity in the provision of health care have led to the evolution of the role of Clinical Specialist. Although this role is defined various ways in specific institutions, essentially a Clinical Specialist is a nurse prepared at the master's degree level to provide increased knowledge and expertise in a delimited clinical area.

Esther Lucille Brown states that the:

> . . . clinical specialist generally stands outside the organizational line on the chart in order that the nurse may have more freedom to move where and when she thinks she is most needed. She is a consultant who also acts as a practitioner, teacher, and supervisor; her primary role, in cooperation with the physician, may be viewed as that of representative of the patient's interests within the concept of comprehensive, coordinated, and continuing care. . .[7]
> . . . .
>
> . . . It [role of clinical specialist] is designed to replace the technical-managerial role now employed by staff nurses generally and the non-nursing administrative-supervisory role that has occupied so much of the attention of head nurses and supervisors.[8]

Increasing emphasis upon health promotion and maintenance as well as upon prevention of illness in our society has led to a re-evaluation of delivery of health care. Clinics, outpatient departments, ambulatory care centers, group practice, and home health services are becoming increasingly important. The role of the Nurse Practitioner has been evolving to enable nurses to function more effectively in these settings. The Committee of the Secretary of Health, Education, and Welfare stated:

> As health care becomes increasingly valued in our society, nurses will be expected to take more responsibility for the delivery of primary health and nursing care, for coordinating preventive services, for initiating or participating in diagnostic screening, and for referring patients who require differential medical diagnoses and medical therapies.[9]

The School of Nursing has operated a continuing education program for preparation of Pediatric Nurse Practitioners since 1970. Currently a new program for Adult Nurse Practitioners is being designed. Eventually it is anticipated that opportunities will exist for baccalaureate and master's students to have these additional skills built into their programs, at least as an elective.

Practitioners gain skill through internship and preceptorship arrangements extending over a ten-month period and utilizing various hospitals, health care centers, or group practice settings.

Major Problems Encountered

Instruction. Faculty from the School of Nursing plan for and participate in the experiential learning of students. In any field where close clinical instruction is involved, student-teacher ratios must be kept as low as possible. Naturally this affects the cost of educating professionals.

Much administrative effort goes into arranging for the wide variety of experiential learning which occurs. Many agencies can only accommodate a few students at a time, thus necessitating wide-scattered, extensive travel for instructors and coordinators.

In some agencies joint appointments have been effected to enable individuals with a primary appointment in the agency to assist in establishing a positive learning environment and to interpret the program to patients and personnel. While joint roles are generally recognized as desirable and necessary, it has been difficult to implement this concept here except at the Clinical Specialist level.

Due to the physical arrangement, the University Health Center of Pittsburgh would appear to an outsider as a very logical place for extremely close cooperation to exist between agencies and educational programs. However, due to the voluntary nature of the Center and the loose organizational structure, it is often difficult to implement nursing goals or interdisciplinary efforts.

Local settings do not always keep pace with national trends. A school cannot prepare large numbers of individuals for new roles before agencies create opportunities for them to function in new ways. Also, faculty must be prepared for new roles before they are able to prepare the students.

Some health care agencies which might be able to provide experiential learning are greatly restricted to students because the patients or clients believe that experiential learning represents "second class" care.

During this transition period much confusion and mixed emotion exists over the overlapping roles of medicine, nursing, and social work. Health professions are under pressure to create new roles which will even further confound the issue, e.g., physicians' assistants.

Perceived Future Changes and Advantages

Since we are caught up in a dynamic society, changes within the School of Nursing will be intimately affected by changes in the national and local health care delivery scene as well as changes in higher education.

If opportunities for nurses to function in an extended role increase, and if solid financial support for professional education in a university setting continues, it would appear that many options will be available to the school. The Clinical Specialist and Nurse Practitioner programs will be continued, strengthened and perhaps modified to meet unique needs of different types of health care agencies.

The undergraduate curriculum is currently being evaluated in terms of providing more flexibility for individual interests, earlier opportunities to consider specialization, and a broader range of experiential learning including rural settings.

Means of evaluating experiential learning obtained outside of the educational program are continually being evaluated and updated. Better articulation between campus branches of the University of Pittsburgh as well as between community colleges and the University will help to expand the number of nurses with strong professional preparation. This school is vital to the state as well as to the nation since Pennsylvania has long ranked first or second in all of the United States in the production of nurses. The range has averaged between 10 and 12 per cent over the last fifteen years.

Simulated experiential learning is being developed in the rather extensive Learning Resource Center which the school has established. Faculty are becoming more proficient in using educational technology to achieve educational objectives.

Closer working relationships between the School of Nursing and health care agencies must be cultivated in order to ensure production of manpower to meet the nursing needs of the region and to ensure that its educational programs are highly relevant.

If licensure and certification of nurses becomes linked to mandatory continuing education, it is predictable that this school will become a vital link in a state-wide and nation-wide system. Even if that possibility does not materialize, much more effort to provide updated experiential learning through continuing education will probably occur.

THE SCHOOL OF DENTAL MEDICINE

Introduction

There are a number of recent innovations in both curriculum and the nature of experiential learning within the dental school. For example, the School of Dental Medicine makes it possible for students "to apply for graduation when qualified, regardless of their length of study in school."[10] There is also an expansion of professional experiences in the fourth year, largely elective, program. In addition, as with most other dental schools in the nation, there is an increased emphasis in offering emergency services to residents of the community. Although most dental training in the experiential area takes place in the dental school's own out-patient clinic at the University, some students have been able to provide services in outlying clinics.

Unfortunately due to limitations of time, statistical data on the School of Dental Medicine were not collected; the following descriptive material was compiled during faculty interviews.

Major Changes in Program

Curriculum Changes: There is a new emphasis on preparing the dental student for an expanding role of professional concern and awareness, and in providing more and better dental services to communities. For example, there is a specific area entitled, "Professional and Social Perspective," which is designed to increase the future dentist's inclination to communicate with other professionals, and his concern for unmet dental needs in the community. The above philosophy about curriculum development has led to other changes: "The core didactic portion of the curriculum is completed within three years. Expanded elective study opportunities in clinical and biological sciences and the humanities occur early in the third year. It is also possible during the fourth year, to combine a degree program in another discipline or profession. Six dental students are currently working toward master's degrees concurrently with the dental program, in areas such as: Public Health, School of Health-Related Professions area of Child Development, School of Education, and the student doing a master's thesis in Anthropology, Biocommunications within the Speech Department."[11] Seven other students are enrolled in the Master of Science program offered by the Pharmacology Department of the dental school as an element of the core curriculum.

Experiential Changes: At the practice level, a dental student is trained to be a generalist. In so doing, he must also have a grasp of several sub-specialty areas in order to accomplish this goal. Early dental training stressed the need to be competent in only one or two areas. At the graduate level (and there is considerable pressure among students to expand graduate education), students further their competency in specialized areas. "In addition, third-year students spend a minimum of four weeks off-campus in hospital service or community service. Clinical development, which begins in the first year, is enriched and expanded by mid-term of the third year. By mid-term, 20 per cent of the third-year class had progressed to clinical levels that could reasonably lead to completion of the program in three years."[12]

In spite of the individualized approach, it is interesting to note that according to a faculty member: "There is no precipitate rush for the nearest exit; it seems reasonable to interpret the current mode as an indication of student confidence that faculty will provide an expanded and valuable elective fourth-year program."[13]

Major Problems Encountered

Instruction: The most serious problem in carrying out the dental program is that of understaffing. Some faculty were lost to federal programs and newly established schools, and it is difficult to recruit qualified persons due to the extremely competitive atmosphere today. Full-time faculty average about 30-40 hours of responsibility at the school. This means that there is little or no time for community involvement or faculty development in other areas. The present student-staff ratio is altogether too high for the type of clinical teaching that is required for implementation in the school.

Placement: It is difficult to find suitable learning experiences in the community because often no supervision for the student is available. (It is impractical to place faculty in the field as they are heavily committed to the University clinics.) Also, "there have been problems related to student participation in community programs. The current structure of most community health programs provides support for professional personnel to fill roles formerly assigned to students or volunteers."[14] The School of Dental Medicine is presently trying to find alternate community learning experiences.

Evaluation: Evaluation of student progress continues to be a problem as it is with other dental schools. "The elementary problems of objectivity, machine scoring, and data recovery have, of course, been resolved. But objectivity is neither a guarantee of validity nor an assurance of a reliable sampling of the student's knowledge. 'Mock board' test treatments and other conventional approaches are not providing reliable measures of students' typical performance. The first steps of progress will be to improve inter-rater reliability and at the very least, to systematize subjective observations."[15]

Perceived Future Changes and Advantages

Two of the more significant services the dental school will provide in the future are emphasis on prevention and providing dental students with the knowledge of how to assist people in the community to obtain needed dental services. In the latter area, students are expected to analyze the whys of neglected dental service and articulate what is needed and how it might be obtained.

Another significant change in the future will be the expanded role of oral hygienists and dental assistants. These valuable auxiliary persons will take on some of the dentist's preliminary diagnostic functions, thereby freeing the dentist for more specialized diagnostic treatment. Auxiliary dental persons will also be used in the preventative community aspects of dental medicine.

Finally, the private practice of dentistry seems to be changing rapidly. There are now several modes of dental health care: the traditional solo; group practice; and public practice through government services. Some students are already involved in social programs. A case in point is the dental school's involvement in a family care plan based at a methadone treatment center in inner-city. This program, which will deliver comprehensive dental services to families in a faculty-supervised satellite facility, was initiated by the action of the dental student committee.

THE SCHOOL OF EDUCATION

Introduction

There are two types of experiential learning in the School of Education: student teaching and internships. Student teaching is for undergraduate majors in education who spend part of their time learning how to teach in regular school settings. Internships are specifically for graduate students in education, and the intern experience can be differentiated from student teaching since interns are "more concerned with reformulation of school curricula and professional teacher roles whereas student teachers are observer assistants in the social change process".[16] In addition, interns are often teachers of five or more years' teaching experience who are expected to operate in a highly independent and self-directed manner.

Experiential learning at both undergraduate and master's levels is required for all students. Doctoral students may choose the option of a research project. This means that there is a very significant interest and an involvement with the community through the school system, since there are approximately 1,500 (1,208 full-time; 349 part-time) undergraduate students and about 2,800 (756 full-time; 2,102 part-time) graduate students in the School of Education. The School of Education comprises 20 different departments, and it was not possible within the limits of this study to talk to people in all of these departments. However, interviews were conducted with faculty from eight different areas; Elementary Education, Secondary Education, The Triple T Program (master's level), Educational Psychology, Counselor Education (master's and doctoral), Counselor Education (specialist diploma), Educational Administration, and the Department of Special Education and Rehabilitation. It was also possible to collect some general statistical information.

Student teachers at the undergraduate level in the School of Education do not receive remuneration for their services; graduate interns receive the equivalent of half of a beginning teacher's salary. The number of faculty involved in instructing students in experiential learning programs and acting as consultants in the schools is very high. In the eight programs where interviews were conducted, a total of 141 faculty members are at experiential sites where their time is spent instructing students, offering consultation to school principals and teachers, institutional and agency personnel, and participating in team teaching. Although there may be some overlap between programs, this appears to represent more than half of the total faculty of the school. There are also a large number of non-University persons involved in the instruction of students in the various schools. Cooperating teachers (teachers in the schools who are assigned to instruct the university student teacher or intern) and qualified other professionals make significant contribution to the student's experiential education. In addition, principals in each of the schools and agency and institutional directors are involved in planning and implementing the experiential aspect of the student's education.

There are limitations placed on the number of students assigned to each experiential instructor. A ratio is determined based on the size of the particular school through the cooperation of the School of Education and the schools in the community. In the elementary schools, the average ratio is approximately 18 student teachers to one cooperative teacher. In some cases, team teaching reduces the ratio to about eight to one. Students are generally seen on an average of once a week for instruction and guidance. The length of the graduate internship is generally nine to twelve months. Student teachers in the undergraduate programs spend from three to six months per year in experiential learning.

In addition to the traditional involvement with public schools, there are a considerable number of student teaching and internship positions within non-school settings. For example, the departments of Counselor Education and Special Education and Rehabilitation provide many such placements in state institutions and other governmental settings. This emphasis reflects a significant contribution and concern for the emotional and educational growth of students who may not be able to meet the normal demands of the public school situation.

Major Changes in Program

Experiential Changes: The School of Education is involved in innovative efforts in education, and some of these affect the experiential component. Innovations have, in part, been encouraged by the federally-funded Triple T Program (Training the Trainers of Teachers), the primary purpose of which is to increase the effectiveness of the nation's elementary and secondary schools by changing the system of training educational personnel. Besides this program, many of the school's instructional activities take place in six or seven "clinical centers". The centers are actual operating public and private schools where educators-in-training receive at least one full term's instruction on the site. The program began two years ago in the elementary school and is now used in other departmental specialties.

In more recent objectives, there is an explicit philosophical intention to include both faculty and students as change agents at the university-school interface. In line with this objective, there is a pronounced effort to concentrate student teachers and student interns in inner-city rather than suburban training sites. Besides the movement toward urban sites, student teachers now have a continuous teaching experience in secondary education (block placement), whereas formerly the experience was alternated with periods of classroom work. Students in elementary education have increased the amount of time spent from approximately 21 to 31 hours per week.

Traditionally, student interns had a summer internship followed by one-half year of further experience. Interns were usually hired for teaching positions following their internships. At present, students have several possible internship options; however, due to a shortage of placements, there is, in fact, often no choice but to accept whatever opening is available.

Instructional Changes: Traditionally, interns and student teachers were supervised by one University faculty member who kept the student informed as to his progress. Within the last five years, this approach has been changed to what is described as "clinical" supervision, where interns and student teachers are perceived as part of a partnership both with one another and with the cooperating teacher. This new arrangement is primarily a result of the increased use of the team teaching concept.

Major Problems Encountered

Financial: Recent financial cutbacks are definitely affecting the intern. The employment market will have a continued and perhaps crucial impact on the future of intern programs. In addition, the fact that the Triple T Program is to be discontinued, as scheduled, at the end of 1972-73 academic year, will also affect a considerable number of students and the intern programs as well.

Instruction: There is a shortage of faculty to carry out student instruction in the experiential settings. There is also a lack of a full-time faculty person to coordinate school placements.

Placement: Locating placements for secondary student teachers has always been a problem. The reasons are: "(1) We must compete with other universities who place secondary student teachers in secondary schools; (2) a number of secondary schools limit the intake of student teachers due to favoritism or traditional ties with a particular university; and (3) some universities sign contracts with secondary schools."[17]

In some instances, the school is not suitable for a learning experience due to political problems within the school-community or simply resistance to new teaching concepts. As one faculty member pointed out, "We can only place an intern in a school by invitation. This implies that the school board and parents must approve of our intern program."[18]

Other Problems: Not all faculty support the notion of the internship experience. Disruption of schools due to political and other reasons does affect intern and student teaching opportunities and is a direct reflection of the impact of the urban crises on training. One faculty member suggests that traditional internship programs will suffer from competition with new ideas, and the major problem will be to justify their continuing existence.

Perceived Future Changes and Advantages

For the future, it is projected that there will be a lengthening of the internship and student teaching experience and an increasing investment of faculty in the problems "out there" (faculty presently spend as much as two and one-half days a week in off-campus departmental consultation and teaching roles away from the University). In addition, some departments are making increasing use of non-traditional settings. There will also be a continued use of "clinical or teaching centers" as a tool for teaching, and student interns in particular are encouraged to promote social changes during the intern experience and after graduation.

THE SCHOOL OF LAW

Introduction

The law school at the University of Pittsburgh has a total enrollment of 525 full-time students. There are 16 full-time and seven part-time faculty at the school. The internship program within the law school has undergone changes over the past several years. A few brief comments will be made below on the traditional internship before the present program is discussed.

In the state of Pennsylvania until very recently, law students were sponsored by an individual lawyer (preceptor) or a law firm. The individual lawyer or firm was to provide the student with 90 days of practical training, usually during the summer months. However, during the past five or six years, this type of experiential learning situation has been discontinued because students were often found to be doing unstructured and unrelated assignments which seemed to have little reference to their training. Since the discontinuation of the preceptor program has been gradual and recent, programs in experiential learning at the law school are somewhat limited at the present time. The following material, obtained through interviews with faculty members, is therefore descriptive in nature.

Major Changes in Program

Curriculum Changes: There are interdisciplinary courses offered to law students in addition to their regular course work. There is a course in health law established in cooperation with the Graduate School of Public Health. This program allows a student lawyer to work on a graduate degree in public health while augmenting his studies in fields such as hospital legislation and environmental and public health law. Other recently added programs include Modern Social Legislation, which deals with laws concerning housing, employment, and social security; and a combined course in evidence, constitutional law, and criminal law offered as a part of the University's graduate program in forensic chemistry, or chemistry related to the investigation of crime.

Experiential Changes: In the area of public service law, the school has established a Legal Clinic course designed to provide lawyers-in-training with an internship through the federally-funded Neighborhood Legal Services. The purpose of this program is to assist citizens who may not be able to afford a practicing attorney's fee, with consultation about their legal problems. During each trimester, approximately 60-70 students spend one-half to one day a week in a Neighborhood Legal Services office. There is a practicing attorney in each of these neighborhood offices, and the student is directly responsible to him. Quite frequently the student serves in an "intake" or "screening" capacity to assess the actual legal problem of the citizen. Although the caseload of the student will vary according to the neighborhood, he may be required to handle as many as 150 cases in one semester.

In addition, there is a developing experiential component involving law students with prisoners' legal problems at Western Penitentiary. Approximately 30 students spend one day a week dealing with prisoners' legal problems. Most of the problems are connected with post-conviction situations and demand a good deal of analysis and fact-gathering. In this experiential setting the student provides a service to the court by clarifying legal requests of prisoners, at the same time, he is giving a service to the prisoner.

In addition to the above-mentioned programs is a summer "internship" for a limited number of law students in seven or eight of the larger law firms in Pittsburgh. Application for these internships are open to all law students at the beginning of their second year of training. However, only a limited number of students can be considered by these few law firms. Only about 10-15 students in a second-year law class of 265 could be accepted. Students are paid for their work in these firms.

The major purpose of this summer internship is for the law firm to assess the student's potential in the firm. A majority of these students are hired by the firm at the end of their third year and are made an offer of employment at the end of their summer placement. In a sense, this "internship" is a carryover of the traditional system except that it is very selective and more to the benefit of the law firm than to the learning that the student might obtain.

Finally, it should also be mentioned that many law students find their own summer or part-time jobs with smaller law firms. It is speculated that about fifty per cent of the law students work part-time in various law firms. However, this is arranged by the student himself.

Major Problems Encountered

Placement: Aside from the two formal programs in connection with the Neighborhood Local Services Centers and the Western Penitentiary Program, there are not enough available sites for internships. Although there are about 20 large law firms in Pittsburgh and 239 law firms in Allegheny County, only seven or eight of these firms are able to provide summer internships. Even within these seven or eight firms interns are selected from other major law schools as well.

Although the reasons are not entirely clear as to why other firms in Pittsburgh do not provide internships, it may be a result of lack of time for a lawyer in private practice to supervise students, as well as smaller firms not being able to afford the monetary sacrifice of employing such students.

Perceived Future Changes and Advantages

Apparently, it is difficult for the law school to envision any immediate change in the direction of providing additional internships. On the other hand, there are increasing signs that some law students have become more involved and concerned with minority problems and with persons who are unable to afford services of a private lawyer. This group of students represents about 20 per cent of the student body, and they are sometimes able to find "internship" experiences within Legal Aid or other governmental service agencies at the federal level. However, internships at the federal level are very limited. The federal government is only able to offer a total of 159 summer internships for all law students in the country.

At the same time, it should be mentioned that the Law School has now adopted a simulated practice course into the curriculum and the school has received a foundation grant to support its implementation. The third year law student will choose areas of skill development that he is interested in. Some of the skills mentioned are: decision-making theory, professional responsibility, advice, negotiation, drafting, arbitration, litigation, fact investigation, interviewing, lobbying, research, evaluations, emotional support and the role of scapegoat. The overall emphasis then of the third year program will be to provide an effective bridge between law school and the practice of law.

THE SCHOOL OF PUBLIC HEALTH

Introduction

The School of Public Health, established in 1948, provides a number of programs for research and study at the master's and doctoral level such as: Biostatistics, Epidemiology and Microbiology, Occupational Health, Radiation Health, Population Division, and Public Health Practice. Faculty interviews were concentrated within the department of Public Health Practice where there is a large component of experiential learning because of already heavy demands of faculty time.

Public Health Practice includes the programs of health planning, mental health, environmental health, health law, international health, maternal and child health administration, medical and hospital administration, public health nursing, public health social work, and public health social science.

From data elicited from six of the Public Health Practice programs, the following facts emerged: The Medical and Hospital Administration program provides the longest period of experiential training among these programs, 12 months of internship in a hospital. The other programs average about three months for the experiential component. The Medical and Hospital Administration program arranges for most of their students to receive stipends from the hospitals involved in the program. The recently developed Health Planning program also provides a few stipends for its students, primarily from federal funds. In the four other programs of health practice studied, there is no remuneration provided while the student is in the agency. Five of the six programs studied indicated an enrollment of approximately 12 students per program with the exception of Medical and Hospital Administration, which has 55 graduate students in its two-year program, and Health Planning which has 32 students in its five term program. All of these programs require students to have a period in experiential learning.

In all of these six programs, there is a heavy reliance on non-University instructors to supervise the experiential component, although most faculty are also involved. The total number of non-University instructors in the six programs is 85, and there are more than 90 organizations utilized as experiential sites. The Medical and Hospital Administration program uses the largest number of experiential sites.

Generally, students are seen for conferences one to two times weekly by experiential instructors. However, in three of these programs, there is no formal evaluation, and experiential learning is not included as part of the overall grading process. The remaining three programs do evaluate experiential learning as part of the grading process.

Major Changes in Program

Experiential Changes: Since most of these programs are very new, major changes can only be described for two older programs, Public Health Nursing and Medical and Hospital Administration. About ten years ago, a major change occurred in the Medical and Hospital Administration program, which moved to include experiential sites outside the immediate Pittsburgh area. This shift was accomplished to provide quality internship experiences for an increased enrollment. Present outlying sites include hospitals in Chicago, Indianapolis, Dayton, Detroit, Boston, and New York. The program at Pittsburgh is one of only seven of 31 accredited schools across the nation to retain a residency or experiential learning component for its students. Opportunities for residencies are scarce, largely because of a quantitative shift in administration practices which, for the time being at least, has led to a decline in the acceptance of student interns.

In the Public Health Nursing program for the advanced clinical practitioner, changes indicate increased responsibility and self-direction on the part of the student is emphasized and students also experience more variety in agency placement, including ghetto experiences and outreach centers.

Major Problems Encountered

Financial: Financial cutbacks within some of the hospitals used by the Medical and Hospital Administration program have begun to affect the training of the administrative resident. As of the 1971-72 academic year, nine hospitals that were traditionally utilized for residents in training could no longer afford to pay student stipends out of their own budgets. Some of these hospitals stipulate that they should not be required to pay for the student's education. This meant that eight out of 27 residents were unable to secure a resident learning experience.

Although newer programs in public health do not have serious financial problems, it must also be recognized that such programs as Health Planning-Practice are largely supported by federal funds on a limited time basis, and may have to eventually be incorporated into the University budget for continuation.

Perceived Future Changes and Advantages

There appears to be a high degree of interest and enthusiasm among faculty and students concerning the value of the experiential component in the educational process. This is particularly so in the newer schools who have recently established this component. The faculty of these recently developed programs express eagerness to develop these programs to their maximum potential. Older programs such as the Medical and Hospital Administration program are undergoing an interesting conflict which may be felt

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in some of the newly developing professional schools. On the one hand, hospital resident programs on the national level have moved toward a greatly reduced use of the resident program. On the other hand, data at the program demonstrate that the average age level of entering students is increasingly in the under-thirty bracket. It is perceived by both students and faculty that the reduced age level means students do not have prior experience of an administrative nature, and are therefore more in need of a residency than their predecessors.

Faculty have a common concern to have a full-time coordinator for the experiential component, and believe it is to the advantage of the student, agency, and departmental program to have such a position. It is hoped that resources can soon be found for such a position.

THE SCHOOL OF SOCIAL WORK

Introduction

The School of Social Work, with a long tradition of community service philosophy and practice, continues to expand its involvement with the community, while at the same time extending its educational program at both the doctoral and the undergraduate levels. There are currently twenty students in the doctoral program, 46 students in the new undergraduate program begun in 1971, and 137 students in the master's program. The undergraduate program does not as yet include an experiential component, although this will be implemented in the near future.

Historically, the program has relied heavily upon non-University experiential instructors, and data from the school indicate that at present there are 114 non-University persons supplied by agencies, institutions, and government offices in the community. Fifteen of the thirty-seven full-time faculty also instruct students in the experiential component. This represents a departure from traditional faculty responsibilities since, until recently, instruction by faculty members was confined to the classroom. The School of Social Work places a limit of two students to an agency experiential instructor which seems realistic given the commitment of such an instructor to agency obligations. It represents a movement toward individualized instruction, however, for an agency supervisor might have been assigned four or five students in the past. Students are seen weekly for conferences, and there are several methods of formal evaluation which are included as part of the grading process. Each student spends a total of 600 hours per academic year in experiential learning, or the equivalent of about four months of full-time work.

Major Changes in Program

Curriculum Changes: There are three methodologies in the theory and practice of social work at the master's level: casework, groupwork, and community organization. Recently, the methodologies of casework and groupwork have merged in both class and field instruction so that students experience a combination of theory and practice in an integrated fashion. Previously, students tended to specialize in one of the methodologies. All students take courses in community organizations as well. Thus, the major shift has been from a somewhat narrower methodological approach to a problem-solving approach. Community organization provides a combination of casework and groupwork skills combined with a knowledge of community processes such as social policy and social change. This sequence attracts increasing numbers of students, particularly black students, which evidently reflect a keen interest in social change. There are new courses in administrative and supervisory skills, and students are also encouraged to consider the training needs of paraprofessionals in the field.

Experiential Changes: There is an increased use of faculty as field instructors. The major reason for this is to allow for more educational control over the experiential learning component. The use of experiential settings has shifted to more non-traditional agencies which reflects a concern for a preventative emphasis rather than a rehabilitative emphasis. For example, casework and group work students are increasingly placed in health and correctional agencies, while community organization students are taught the "advocacy role" and are placed in NAACP, the Mayor's office, and a few governmental offices at the state and federal level.

Major Problems Encountered

Financial: Funding of students enrolled in the master's and doctoral programs has become a serious issue during the past two years. Data received from the school indicate, for example, that half of the 1971-72 students have no outside funding in the form of federal or other cash grants, and that only a small number of students receive stipends from agencies. Funds from the federally-sponsored but state-administered professional education program dropped drastically from 26 per cent of students funded in this manner in 1971 to a low of 4 per cent in 1972. (At the national level, the professional education program during the past ten years funded about 45 per cent of students enrolled in social work schools.)

Instruction: In a few instances, agencies cannot provide qualified experiential instructors, and the faculty must provide this. There is often the conflict of education versus service in the field experience, and the School of Social Work attempts to bridge this gap by providing special classes for agency instructors and involving agency social workers on the school's committees. Occasionally, there is difficulty in obtaining a suitable agency. In addition, field instructors have responded to student demands at both local and national levels for an increased use of a more flexible instructor-student relationship. The overall aim is to reduce a too heavy dependence on the field instructor, so that students will be able to make a realistic transition to a more independent role when entering employment.

Perceived Future Changes and Advantages

Curriculum projections indicate that there will be a movement toward increased specialization in areas of health, corrections, and welfare. This will result in combining a social work methodology with a clustering of skills in certain specialized areas. Students are now exposed to a new course on organizational change which is intended to assist students in becoming more aware of the problems of change within organizations. There is also a plan to develop a mid-management sequence for social workers planning to move into administrative positions.

The community organization sequence will concentrate more on social policy areas and will attempt to develop field placements in Washington, D. C. There are already few such placements in Harrisburg. It is projected that increasing numbers of community organization graduates will enter upper-level management positions, whereas the B.A. graduates will assume the "grass roots" community organization positions.

The School of Social Work greatly expanded black enrollment in 1967. Although there was a subsequent period of confusion, the belief now appears to be that this development led to a constructive aftermath and increased involvement in urban problems.

THE SCHOOL OF HEALTH RELATED PROFESSIONS

Introduction

The School of Health Related Professions was established in 1969 and is the most recent addition to the University Health Center. There are four departments: the Department of Child Development and Child Care, the Department of Medical Technology, the Department of Physical Therapy, and the Department of Health Records Administration; and one division: the Division of Health Related Professions Instructional Services. The Division offers a B.S. in HRP for licensed oral hygienists who desire added competency in teaching and administration. The four departments offer a Bachelor of Science. The Department of Child Development and Child Care also gives a Master of Science degree.

The unique feature of this school is that it trains persons for a professional role at the undergraduate rather than graduate level (with the exception of the Child Development and Child Care Department). Students enter in their junior year of college. Applications have increased considerably since the school opened, and the school is limited in the numbers of students it can accept.

Data collected indicate that there is a total enrollment of 222 undergraduate students and 81 graduate students in the Department of Child Development and Child Care, and there are 28 full-time faculty and 14 part-time faculty. All students enrolled, excepting for oral hygienists, are engaged, for varying lengths of time, in the experiential learning component. Students do not receive remuneration while learning and working in the experiential site. There is considerable reliance on non-University persons (approximately 150) to serve as experiential instructors in (97) different hospitals and agencies. One faculty member from each of the four departments is assigned as clinical coordinator of experiential learning in that particular department. There is an effort to develop experiential sites and work closely with the off-campus experiential instructors through the use of the clinical coordinator. Meetings and continuing education programs are also utilized as a means of maintaining cooperation and communication.

The formal evaluation of experiential learning is utilized in all departments of the school and is considered as part of the grading process. The Medical Technology Department has been able to reduce the experiential laboratory work from 52 to 17 weeks by offering laboratory courses in the department.

Major Changes in Program

Since the school has only very recently been established, it is too early to perceive any major changes in the curriculum or experiential area. It may be interesting to note some developments in the school in comparison with the national level.

Medical Technology Program: Traditionally, most medical technology programs have been based in hospitals, and this is still true at the present time. The Medical Technology program at the University of Pittsburgh, however, has developed a program in which they teach all lecture courses and most laboratory work within their own facility, although the facilities of six hospitals are also utilized.

Physical Therapy Program: There are a number of gradual changes at the national level which are reflected in the newly-established Physical Therapy program at the University of Pittsburgh. Greater emphasis is placed on experiential learning early in the curriculum. There is a wide variety of clinical facilities used in the program. Physical therapy involves a broad spectrum of activities including direct patient service, administration, research, teaching and community service. Students are considered learners rather than service persons. There is greater emphasis on a problem-solving approach in patient care services.

Major Problems Encountered

Financial: By and large, since the program is small, there are few serious financial problems related to the experiential component. All of the experiential sites and instructors are provided free of cost to the University for the benefit of students, although some remuneration in the way of direct payment or continuing education opportunities are being requested by some experiential sites. In the case of the Medical Technology Department, there was some initial difficulty in obtaining enough money for laboratory demonstrations and technical equipment, although the department has made considerable progress in these last three years having received all funds requested for equipment and laboratories in Pennsylvania Hall.

Experiential Instructors: There is a serious shortage of qualified instructors in Medical Technology. Accreditation requirements in Physical Therapy, Medical Technology, and Health Records Administration also make it difficult to find placements that meet standards. The heavy reliance on agency personnel to provide experiential supervision reflects the problem of not having enough faculty involved in this area. Without the community agencies and dedicated professionals, these programs could not survive. The Child Development and Child Care program does not have so much difficulty in this area, partly because it has evolved over a number of years. At one time it was part of the Department of Psychiatry in the medical school. They also can draw upon a number of different experiential settings in child care, without having to worry about accreditation, since most of these programs already adhere to professional standards of their own.

Placement Difficulties: Accreditation requirements in a few of these health-related programs place a limitation upon locating experiential sites for students. Also, if a student is being trained in a hospital, he must share the facility with students of different schools and of varying educational backgrounds. This brings added competition for experiential site spaces, but also is an advantage in providing experience with students of other schools and levels of education.

Perceived Future Changes and Advantages

There are a number of anticipated changes, particularly since this is a relatively new school. These changes are indicated by departments.

Health Records Administration: The development of a part-time curriculum will allow persons who have an associate degree (Assistant Record Technician) to return for updated knowledge of Health Records Administration. There is a trend toward a broad concern with health records which will reflect a knowledge of and concern for all areas of health, not just those found in the medical records departments of hospitals. This means moving into settings such as neighborhood centers, health centers, visiting nurse associations.

Physical Therapy: There is a definite trend toward the development of administrative, teaching, and research roles at the master's level, and in a few instances, at the undergraduate level as well. A master's degree program is being proposed within the Division of HRP Instructional Services for this purpose. Interestingly, there are increasing demands from other disciplines to allow their students to enroll in physical therapy courses.

Medical Technology: A number of new sites will have to be located so as to meet the increased demand of students who wish to enter the program; there will be an emphasis on rural needs in medical technology; and there will be an attempt to draw more men into what is presently considered a predominantly female occupation. The proposed master's degree program in the Division of HRP Instructional Sciences will also meet the need for graduate level personnel in this profession.

Child Development and Child Care: For the most part, this program will continue as at present with B.S. graduates being trained for direct service roles, while M.S. graduates are likely to enter administrative careers in child development at some point. There is likely to be more flexibility in the practicum sites and greater individualization concerning the student's overall experience. Another positive feature of this program is that it utilizes a wide variety of settings with a number of different professionals.

THE GRADUATE SCHOOL OF PUBLIC AND INTERNATIONAL AFFAIRS

Introduction

An internship experience is offered as an option in lieu of a thesis requirement at GSPIA. At the termination of an internship, a student must present a substantive report acceptable to the standards of a master's thesis to the faculty committee of his department. A recent survey conducted by the coordinator's office for internships revealed that approximately one-half of the students enrolled at GSPIA are interested in having an internship experience. Due to the fact that there aren't enough agencies that have provided in their budgets for interns, the number of students desiring internships exceeds the number of available internship positions. Questionnaire data were collected from GSPIA, and several faculty members were interviewed.

A student committee, supported by a nucleus of faculty, were instrumental in encouraging a formal development of an experiential learning program. Formal institutionalization of the internship program at GSPIA was effected in 1970, with the hiring of the coordinator responsible for the development of internships for the entire school, which includes the departments of Public Administration, Economic & Social Development, Public Works Engineering, Urban Affairs, and International Affairs. At present, faculty representatives from each of these departments serve on the internship committee. A breakdown of the number of students involved in internships from each of these departments indicates that the highest number are in Urban Affairs, followed by Public Administration, and International Affairs.

Other data indicate that interns usually receive remuneration from the organization in which they are placed. Potentially, all faculty are available to student interns for instruction and consultation concerning the experiential learning component. However, it may be that students select faculty members mainly on the basis of an interest in experiential learning. In any case, not all faculty are involved in the program. All students have agency or organizational representatives who supervise them at the experiential site. As of 1971-72, there were approximately 25-30 organizations being used as experiential learning sites. How often a student is seen by the faculty concerning his progress in experiential learning varies, depending on what the student and the faculty member agree upon. In addition, a number of formal evaluation procedures are utilized in assessing the student's progress in experiential learning, and these evaluations are considered when reviewing the organizations for future intern placements. Most student interns spend approximately four months as interns, but the time period can expand to as long as twelve months. Interns have been placed in many local governmental agencies as assistants to borough and township managers. Some of the other agencies represented are Urban League of Pittsburgh, Housing Authority of Pittsburgh, the Pittsburgh Office of HUD, Turtle Creek Valley Council of Government, Allegheny County Bureau of Consumer Protection, Toronto Metropolitan Planning Board, St. Louis County Municipal League, Argonne National Laboratory's Center for Environmental Studies, Atlanta Housing Authority, United Nations' Population Division, Health Planning Council for Central North Carolina and Management Services Division of the City of Dayton, Ohio.

Major Changes in Program

Since the program is a relatively new one, there has not been enough time to elapse for significant changes to occur in curriculum or experiential aspects. However, the original decision of the internship committee to have the internship experience after the completion of three trimesters of course work has begun to be altered to some extent. More recently, some students have been allowed to have an intern experience at the completion of the second trimester. In some instances, these students are motivated for an earlier internship experience due to financial need. However, most students still enter the experience following the third trimester.

Major Problems Encountered

Development of Internship Program: The early stage of implementing the intern program was met with resistance on the part of some of the faculty and even at present there is not a total commitment by faculty to support the notion of the intern experience. However, some faculty members who originally preferred a thesis requirement are now less resistant to the idea. According to one faculty member, "their resistance has broken down because the students have demonstrated its value."

Financial: Two faculty indicated that there should be a full-time coordinator of internships from each of the departments in the school rather than only one coordinator for the whole school, due to the heavy demands on one coordinator for the whole school. However, the present budget does not allow for this.

Experiential Sites: Experiential sites are in short supply. A most critical aspect, reported faculty interviewed, is the shortage of agency supervisors. In addition, some mid-career women must have a placement within the Pittsburgh area as they do not have time to travel or live in other areas.

Perceived Future Changes and Advantages

The changes projected indicate a concern for improving the existing internship program. Among the suggestions made by some faculty for a more positive program are: that faculty involved in the program should be given explicit recognition for their efforts; that each department within the school should identify and define expectations of the intern experience; that the program should receive more constant review by the existing internship committee; and that additional financial resources must be made available if the coordination aspect of the program is to be developed adequately. Finally, it is anticipated that this type of learning will become a vital part of GSPIA's educational experience, particularly for those students without prior experience in social agencies.

THE ARTS AND SCIENCES

Introduction

The application of classroom learning to direct experience with the community is a recent innovation in the Arts and Sciences. Traditionally, the "urban university has tended to divorce itself and its academic programs from its surrounding community. At the undergraduate level, direct experience with these problems has been virtually nonexistent, except for scattered volunteer activities. However, at the national level, recent trends indicate that universities are beginning to look outward from the classroom and to place increasing emphasis on experiential learning as a valid component of the educational process. This is particularly so in urban studies and ethnic studies programs."[19] Nevertheless, "only a few liberal arts institutions have incorporated community involvement into the regular degree programs to date."[20]

It is within this more general context that an attempt was made to ascertain the degree of involvement, as well as any apparent trends, in experiential learning in the Arts and Sciences at the University of Pittsburgh. A brief questionnaire was sent to the chairmen of all departments in the Arts and Sciences early in 1972. In the questionnaire, the chairmen were asked to list any courses or other projects involving experiential learning for their students. They were also asked for statistics on the number of students and faculty involved in such courses and projects, as well as for information on time periods involved in community experience. The chairmen were asked to fill in data under two headings, posing two separate definitions of experiential learning:

(1) Learning which takes place out of the classroom in which the student is directly involved in providing some kind of community service. This learning is considered part of course requirements and is planned, guided, and evaluated by a combination of the University, community agency, and student.

It could include a Social Science student helping in a retarded children's home; an English student tutoring the disadvantaged; a Chemistry major doing a water resources study for a small township.

(2) Learning which takes place out of the classroom and wherein the student is involved through research, field studies, or other special projects outside the University. However, in this situation the student is not engaged in providing direct service to the community. All of these activities are considered part of the course program requirements in your department.

Activities in this category might be a Business major engaged in a marketing survey; a Geology student undertaking a field trip; a Political Science major examining voting records at the county court house.

Of the 32 questionnaires sent out to departments in the Arts and Sciences, 23 (72 per cent) were returned. The results, briefly summarized, were as follows:

--- Three departments indicated a community service component in some courses.

--- Nine departments include courses where learning takes place outside the classroom, in which the student was not engaged in providing a direct service to the community.

--- Thirteen departments indicated that their curriculum did not include either type of experiential learning.

In total, there are seven courses dealing with some aspect of community service: three are graduate courses with an average of 10-20 students per course, and four are undergraduate courses which averaged 32 students per course. There are a total of thirteen courses involving research, field studies, or other special projects not characterized as community service: five are graduate courses with an average of 50 students per course, and eight are undergraduate courses with an average of 36 students per course. Those courses which involve a community service component require an intensive investment of time, that is, at least one hundred hours in the community placement per semester. Courses involving research, field service, and special projects have a wider range of time in the field. Students spent from five to one hundred hours per term, or an overall average of thirty-three hours.

In the following sections, attention will be devoted particularly to the several departments which include a fairly strong emphasis in experiential learning involving community service. These departments are Clinical Psychology, Speech and Theatre Arts, and Black Studies. Courses in which there is no direct service to the community at both graduate and undergraduate levels and which at the same time take students into the community reflect a fairly long standing interest in field work of various kinds. Students sometimes work as groups and sometimes as individuals on research or other special projects. One example is Political Science 145, an undergraduate course where students engage in a variety of projects having to do with urban politics, neighborhood studies, documentary studies, as well as investigations into housing, pollution control and party politics.

Psychology Department: At the undergraduate level, the Psychology Department presently offers two courses with an experiential component to them. Psychology 166 is a new course taught by a graduate assistant and is concerned with mental retardation. This year field visits were arranged whereby students in the class could learn more about mental retardation. There were 30 students enrolled, and they visited facilities for retarded children.

Another new course (Psychology 127), entitled Interpersonal Communications, is taught at St. Francis Hospital. This course is designed for students who do not plan to attend graduate school, yet want to acquire some basic counseling skills for job preparation. These students (15 selected from 52 applicants) were taught skills in interviewing, group encounter experience, and individual assistance with their own problems. They assist each other in the group experience and occasionally interview an outsider in front of the class. This course originated partly because students were asking for an opportunity to gain some skills in preparation for a job, and partly because a faculty member had the interest and skills required to teach in this situation. Of special interest were the comments these students made in individually initiated letters to the chairman of the department. In all instances, these students indicated that this was the most significant course they had taken in their entire four years of college. One was left with the impression that there was a considerable degree of individual and group growth as well as considerable respect for the teacher.

A third course is being planned for Fall of 1972 (Psychology 116). This course will be a practicum experience for a limited number of students (12) who will be placed in various mental health institutions.

They will be given supervision by the staff in the institution and the faculty member teaching the course will provide consultation for the supervisors. Students will be in the institution about six hours a week and will receive three credits for the course. This course came about as a result of students requesting a field experience. The faculty met the need but wanted to provide a suitable experience so that students could receive credit.

Although it is anticipated that undergraduate students will continue to desire courses with an experiential component, it is debatable as to how far Psychology or other departments can move in this direction. As one faculty member indicated, "University education should be focused on education, not training, and the University should not become a training school."[21]

At the graduate level, the Psychology Department has a Clinical Psychology program in which there is a heavy component of experiential learning. Currently, there are 49 students in 14 agencies which meet the accrediting standards of the Professional Psychology Association. Seven of these training sites are situated in cities outside of Pittsburgh, such as: St. Luke's Hospital, Chicago; Columbia University, New York; Langley Porter Neuropsychiatric Institute, San Francisco; Institute for Living, Hartford; Worcester State Hospital, Worcester; Judge Baker Child Guidance Center, Boston. The primary reason for having a number of sites outside of Pittsburgh is because many of the possible training sites in Pittsburgh do not meet accrediting standards.

Speech and Theatre Arts: Within the Speech and Theatre Arts program, there is an experiential component in both graduate and undergraduate curriculum. The total undergraduate enrollment is 60, and about ten per cent of these students are engaged in a community service setting for which they receive credit. Such students observe and perform a service for children in a nursery school and other agencies of a similar nature.

All graduate students (110) are required to spend a minimum of two terms in an agency, school, or hospital. Students receive field instruction from both faculty and agency personnel, and there are ten agencies available for this type of service. There is a formal evaluation made, and this is considered part of the student's grading process. While in these settings, students perform clinical services such as testing and speech evaluation. In fact, to become accredited for speech training, it is a requirement, at the national level, for the student to have a clinical experience.

There is also a program entitled, "Clinical Fellowships", which is a post-masters' experience. Students in this program are usually hired by the agency, full-time, for this training, and it is essentially similar to an "intern" experience. The amount of remuneration, however, varies from agency to agency.

The major problem area is the expense involved in providing instruction for students. For example, recently some of the hospitals where students are placed stipulated that the University should pay students for the clinical experience.

Black Studies Program: It should be mentioned that the information on Black Studies was collected by interviewing a faculty member, since the department felt there were too many activities to be recorded on the questionnaire. Faculty of the Black Studies program are encouraged by the administration to include some field work (research, special projects, experiential learning) component in their courses. The extent to which this is possible, as well as what focus it will take (research/service), depends on the nature of the course, as well as the judgment of the particular faculty member. For example, in the Early Childhood Education course, students spend three hours a week in a nursery school affiliated with the Black Studies program. Upon completion of the course, students are required to write a report on one of the children they have observed. During the second part of the course, the student spends eight hours a week working at the nursery school (students do not do classwork during this period), assisting the regular teaching staff of the nursery.

Other experiential activities revolve around special projects or research activities. Some of the projects have been organized around: finding better ways to assist blacks through information media (television and newspapers); helping blacks to establish a newspaper; finding creative ways to develop a healthier black image through television media; and interviewing local businessmen on special topics. In these activities, students and faculty plan together, and there is a strong component of community service.

In addition, recent research studies by the department, some of which are conducted in the community by faculty and students, include: a study of black institutions in the community of Pittsburgh; a study of the political organization of the Panthers; and a study and development of a new course concerning the history of blacks in Pittsburgh.

Summary

Although it might be anticipated that courses reflecting an experiential learning component would more likely be found in the social sciences, there is actually a rather broad spread over many departments. The departments of Clinical Psychology, Black Studies, and Speech and Theatre Arts are engaged in offering courese at both graduate and undergraduate levels, which reflect an experiential learning-community service component. The departments of Clinical Psychology, Geography, Anthropology, Speech and Theatre Arts, French/Italian, Linguistics, Political Science, Economics, and Classics have a community-learning experience without a service component.

Since not all departments from the Arts and Sciences returned questionnaires, there may very well be a number of other experiential learning courses or projects. However, the overall results reflect only a slight tendency of departments to become involved in community-learning experiences, and a majority of those who do, have already been involved for a number of years. The slowness with which this shift is taking place seems to suggest that: the extent to which such activities may be substituted for classroom learning will continue to be a subject of controversy (as to whether an institution of higher education should become an institution for training service rather than education); there are a few mechanisms in universities for incorporating the necessary planning and coordination to implement experiential learning at the undergraduate level; and faculty caution because of the need for sound educational supervision in the experiential learning situations.

In spite of the fact that the community service component does not yet represent a major change from traditional classroom learning to experiential learning, present courses which reflect this trend do indicate interest in this direction.

SUMMARY OF FINDINGS

In this chapter, an effort is made to summarize a number of trends, some of which are common to all experiential learning situations, while others reflect a particular clustering of trends in special areas. Recognition is given to the several areas which have been emphasized throughout the case study: Major Changes in Program, Major Problems Encountered, and Perceived Future Changes and Advantages. The implications in each of these areas will be discussed at the end of each section.

Major Changes in Programs

There is an increased use of "inner-city" experiential sites by the professional schools at the University of Pittsburgh. This is, in part, an apparent result of the urban crisis and funding appropriated for the purpose of finding ways to alleviate urban problems. This trend is particularly evident in the Schools of Education, Medicine, Public Health, and Law. For example, the medical school utilizes community-oriented experiences with minority groups, and the law school has experiential learning in neighborhood legal centers and prisons. The School of Social Work has been more traditionally involved in urban areas, and the new School of Health Related Professions has begun with an emphasis on inner-city placements.

The greater emphasis on the urban crisis has also promoted classroom, research, and experiential activities which reflect a movement toward concern for social change. In a majority of interviews, faculty members reported that students are more concerned with urban problems and social change than they were five or ten years ago, and that this new student orientation has also had some effect on curriculum changes.

Professional schools with a strong service component increasingly stress the theoretical-educational aspect of experiential learning, and the service aspect, while still very important, gets correspondingly less attention. In fact, the educational, research, and service components are often difficult to separate in current experiential learning programs.

Patterns of instruction at the experiential level have undergone some changes, particularly in the School of Education and the School of Social Work. Traditionally, in both schools the student works in a one-to-one relationship with a supervisor or clinical instructor. The School of Education, with its new emphasis on team teaching and the teaching center approach, is moving significantly away from this model. The School of Social Work has become more flexible about the degree of supervision needed, reflecting a concern for individualizing student learning needs. In the present situation, students with varying degrees of experience and academic background receive differing degrees of supervision in experiential learning.

Professional schools evidence an increase in interdisciplinary approaches and sharing of experiential learning situations between schools. Professional schools are also increasingly making efforts to exert greater control over the experiential situation so that the student is educated according to the goals and objectives of that particular school/discipline.

There is a shift toward training professionals at the undergraduate level. Although this is not a pronounced trend yet, it is evidenced in the recently established School of Health Related Professions and in the newly created undergraduate program in the School of Social Work. Although generic training is the general pattern at the undergraduate and master's levels, there is at the same time an increased emphasis on specialists' training at the master's level.

Professional schools in the Health, Education and Welfare fields place increasing emphasis on preventative aspects of service rather than rehabilitative aspects, although rehabilitative service is still a major component of experiential learning.

Individualized approaches to the student's learning requirements are becoming more common. A major departure from tradition is seen in the dental school's decision to allow students to finish dental training at their own pace, the emphasis being competency rather than time requirements. In line with this is a trend in other schools toward a more flexible use of requirements which could potentially shorten the length of training. This is becoming gradually apparent in the medical school and in the School of Social Work.

Professional schools which ordinarily prepare students for direct service roles are increasingly including the learning of administrative and supervisory skills as well. Persons educated at the Associate Arts levels as well as paraprofessional level are increasingly used in direct service roles. B.A. graduates also perform direct service roles, while the master's degree professional increasingly enters administrative positions.

In the newly developed experiential learning programs, students have played a significant role by expressing their interest in such programs. Usually, there is also at least a small nucleus of interested faculty who support the notion and assist in its implementation. Often there is department-wide support or interest.

The Arts and Sciences survey on experiential learning* indicates that, except in a few departments, there is no major trend yet to include this aspect of learning. However, there is a gradual trend, and some faculty anticipate that students may receive more such experiences in the future.

Implications Concerning Major Changes

The increased emphasis on "inner-city" problems inside and outside the University has influenced curriculum planning in a number of schools and seems to reflect an increased responsiveness of the University to "community" problems. Although professional schools have been traditionally and historically involved with the community to provide experiential learning opportunities for students, students now play a more active role in shaping the learning experience. In general, faculty report that students of today are much more activistic in their orientation to problem-solving.

In most instances, the University relies on the community for facilities and experiential instructors. The Schools of Education, Medicine, Dental Medicine, and Nursing are exceptions in that their faculty provide much or even all of the experiential instruction.

It also appears very likely that reliance on the community will increase if professional schools are to meet the demand to expand. This suggests that the public relations aspect of University-community interaction will also become increasingly important.

It may be that patterns of experiential learning will include an increasing component of interdisciplinary knowledge and experience. This is already occurring to some degree in Education, Social Work, GSPIA, and Public Health. If continued, there may eventually emerge more readily identifiable learning patterns common to all students in such experiences. This might also facilitate the development of theoretical knowledge concerning the experiential learning situation. In an effort to develop new and effective teaching models for the experiential component, it may be that professionals from different schools will increasingly share their knowledge. Such cross-fertilization of experience and knowledge may be a challenge and stimulus for all concerned and may result in new levels of theoretical integration in this complex area of learning.

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*See Arts and Sciences section.

It will be interesting to note the trend toward professional training at the undergraduate level. It would appear that this trend may become more pronounced due to the ever-increasing demand for direct service and administrative personnel in many areas. The increase of such personnel will free the advanced practitioner for specialization or administrative-social change concerns.

The preventative emphasis of experiential learning is likely to involve new types of learning situations that will call for new skills, such as meeting members of the public to inform them of prevention programs, devising innovative and effective means of communicating preventative aspects through television and the press, increasing abilities to work in teams with professionals from varying backgrounds, and establishing neighborhood centers to deal with problems in their early stages.

The movement toward individualizing student learning experience reflects respect for individual differences in interests and learning rates. Such an emphasis also places much more responsibility on the student for choosing learning goals rather than on the program or the system. Hopefully, new responsibility and more latitude in making choices will have accelerated students' intellectual and personal growth.

The trend toward providing administrative skills in addition to experiential learning skills seems to be a natural outcome of the demand for qualified persons to administer programs. There is an increased interest in involvement in policy and decision-making. This interest is accompanied by more attention to administrative theory and to the possibilities of cross-disciplinary exchanges in this area. It may be that those who have a primary interest in administration will spend less time in experiential situations so that administrative preparation can begin earlier and become a more specialized field.

Although there is not a significant development of experiential learning in Arts and Sciences at the University of Pittsburgh at this juncture, it seems possible from the interviews with faculty members that student interest in such programs is on the increase. Whether or not this interest will result in a significant increase in experiential learning opportunities for students will depend, in some part, on faculty and departmental time limitations, and philosophical outlooks concerning the issue of "training" versus "classroom education". Another important factor is the problem of locating suitable agencies for student placement. If new experiential learning programs are to be implemented, adequate supervisory personnel must be found and administrative mechanisms must be developed so as to provide effective and meaningful implementation of programs.

Major Problems Encountered

In a majority of schools and departments, there is a shortage of available faculty to instruct the experiential learning aspects of student education. This problem is complicated by the fact that many professional schools have accrediting standards to meet in the selection of clinical instructors or supervisors which necessitates a fairly narrow range of choice among potentially available personnel. In a number of instances, then, expansion of programs, as well as of student enrollment, is limited because there are not enough qualified instructors.

A related issue is the availability of suitable experiential sites. There is a constant pressure to locate new sites, and in some schools possibilities for placement actually seem to be diminishing rather than increasing. In their efforts to provide experiential learning situations, some programs have by necessity sought out agencies in areas quite distant from Pittsburgh. This has been particularly the case in Medical and Hospital Administration and Clinical Psychology. Although some professional schools have been able to open up new sites in connection with an increased interest in the inner-city, they have not been able to get very much involved in rural areas due to transportation problems and lack of funding for rural programs.

Many faculty are very much concerned with the type of learning to which students are exposed on experiential sites. In some situations, students are not given opportunities related to their professional training. Sometimes this has resulted in the withdrawal of student interns from a particular experiential situation, as happened, for example, in the law school. This concern for a systematic experience for the student has led to increased efforts for faculty control over experiential learning programs in some schools.

The recent financial crisis in higher education has affected a significant reduction in experiential learning sites in instances where a school or department relied on financial support in the form of a stipend from an outside source. The agencies concerned were unable to provide funds for student support. Intern programs in the School of Education and in the Medical and Hospital Administration Program of the School of Public Health have been significantly affected by such cutbacks. Federal cutbacks have affected other programs of experiential learning. In the School of Education the Triple T program has been influential in establishing many internship positions at the graduate level. As has been discussed earlier, this federally-funded program is being discontinued. The reduction in student stipends generally has affected many schools. In the School of Social Work, for example, there has been a drastic cutback in support which, for some students at least, puts into jeopardy the completion of the educational program.

The development of new programs in experiential learning has encountered some internal resistance, but, in general, the support of students and interested faculty has led to implementation at least at some level. The most controversial issue has been the worth of such programs for educational purposes. Very directly connected to this concern is the whole matter of evaluating student performance in the experiential situation. This remains a difficult task even for instructors of considerable experience. Although some professional schools have, due to long involvement with experiential learning, well developed evaluative guidelines on which there is usually a fair amount of agreement on criteria, faculty in these schools still perceive discrepancies in weighting evaluative criteria between faculty members. It has been pointed out that there is at present no established method of assessing the competency of practicing physicians, social workers, dentists, and so on. Thus, it is not surprising that student evaluations are not well-established.

The difficulty in evaluating experiential performance is probably related to the interesting finding that only about half of the professional schools included in this study count the experiential component as part of the grading process. A practice in some schools for a long time has been merely to give a pass-fail grade for experiential learning. If experiential programs continue to expand and diversify, the problem of evaluation will become even more crucial.

Implications Concerning Problems Encountered: The problems of finding additional experiential sites and qualified professionals to instruct students in experiential learning are critical, for these shortages greatly hinder expansion in any professional school. Faculty in the schools and departments are faced with the problem of how choices of sites and instructors could be made more flexible without sacrificing standards. One perceived way of easing the situation is to provide full-time positions for the purpose of overall coordination of the experiential learning program in a particular department or school. The coordinator role is viewed by all schools as a vital element in the successful expansion, as well as the continuance of placement in current experiential sites. A less discussed aspect of the coordinator role seems also to be vital: that is, the development of public relations with community groups and agencies who might be receptive to providing placements if sufficient attention is given to their own responsibilities and needs.

A concern of at least equal magnitude is reduction in funding, for students generally and for student internship experiences specifically. At present, the only method of compensating for federal cutbacks appears to be to turn to community agencies and groups for increased financial support. This will mean establishing the usefulness of student trainees in achieving agency goals. The concern of many faculty for more control over experiential learning may cause conflict in attempting to obtain more financial support from agencies.

The twin issues of the meaningfulness of experiential learning and the evaluation of student performance are expected to be foci of controversy for some time. There is certainly a definite trend toward including experiential learning programs in professional schools where they have not been included before. To a lesser extent, there is also some evidence of a growing interest at the undergraduate level. Particularly, in newer programs, relations between agencies and schools or departments may depend on the ability to work out a mutual agreement as to what constitutes a worthwhile educational experience for a student, while at the same time providing sufficient reward to placement agencies. Evaluation of student performance in experiential learning situations is still considered very difficult, in spite of ongoing efforts to provide some objectivity in assessment. In all professional schools, guidelines are utilized, and in many instances students participate in the total evaluation. However, there are indications from faculty members that, in some cases at least, inter-rater reliability is very low, reflecting continuing difficulties even with established guidelines. It would appear that more research is needed concerning methods of evaluation of individual performance so that rather broad models covering a variety of experiential situations can be found. Otherwise, the value of experiential learning will remain questionable in some minds, and it will certainly be very difficult to ascertain what changes should be incorporated in experiential learning.

Perceived Future Changes and Advantages

Professional schools in the health and welfare areas will increasingly stress preventative aspects more than rehabilitative aspects of service. Faculty members in these schools believe that dealing with the source of physical and social ills will more effectively promote a state of well being throughout the community. The health professions also indicate a clear intention to become more flexible in requirements and to lessen the length of time spent in professional training programs. The perceived benefits are responsiveness in meeting varying interests and needs, reducing the overall costs of education, and producing needed professionals more quickly.

The health, welfare, and education schools project a marked emphasis on community aspects of problems in their fields. Such an emphasis seeks to encourage and stimulate graduates to be forerunners in social change which will create better services in the community. In addition, the expanded role of auxiliary personnel in health and welfare and, to a lesser extent in education, is viewed as a significant step toward allowing for more specialized professionals. The advantage will be that the more advanced specialist will have more time to spend on acute and difficult situations, whereas non-specialists can be utilized for generalized diagnostic and rehabilitative services.

It is interesting to note the future emphasis on training professionals at the undergraduate level, particularly in the health related professions and in social work. Persons educated at this level will be used to fill the great need for well-qualified persons in direct service activities. A number of schools, particularly the more recently developed ones, also see advantages in introducing mid-level administrative courses to better prepare professionals for leadership roles rather than direct service roles, which will be increasingly handled by undergraduate or auxiliary personnel.

In all professional schools, there is an interest in greater individualization of student programs which implies encouraging more self-direction on the part of students. In addition, the increased movement toward the use of non-traditional sites, as well as sites away from the immediate Pittsburgh area, is perceived as a necessary and helpful way to locate more suitable sites and to gain additional sites. Most of the schools stress the need for a full-time coordinator for the experiential component, so as to provide more attention to the overall development of the experiential program.

Implications of Perceived Future Changes and Advantages: Although the emphasis on prevention in the health and welfare fields is quite evident, there appears to be difficulty in implementation, largely because practitioners and administrators are kept fully occupied with unmet rehabilitative needs of the community. It may be that professionals and auxiliary personnel will need to be trained in methods of mass communications so as to introduce preventative elements with greater impetus to larger numbers of people.

The strong community focus with a view toward social change in health, education, and welfare fields is very noticeable. However, whether or not graduates of these schools will be more active in introducing changes in community care remains to be seen. It is likely that some professionals will show a greater interest in this than others, and it would be interesting to try to assess, at some future date, the overall effects of this emphasis on former graduates.

The trend toward shortening the length of professional training seems potentially to be a beneficial innovation, and it is in line with more flexibility and individualization for the student. At the same time, there is the possibility that educational paths might emerge which would not be desirable. On the one hand, shortening the educational process might lead to the creation of professionals who know a little about everything but lack depth in understanding in any area. On the other hand, students in professional schools could feel pushed toward early specialization which could have the effect of narrowing rather than broadening social concerns.

In view of the expanded role of auxiliary personnel in the professions in the future, it would indeed seem that a trend toward specialization in the graduate schools, particularly in doctoral programs, would be augmented. The development of auxiliary personnel does seem to have the positive potential of reducing the cost of services in the long run. However, there remains the problem of educating the public to accept auxiliary personnel as qualified to perform tasks formerly handled by professionals of longer training.

It appears then that increased specialization at doctoral levels is being implemented, balanced off by a growing number of programs aimed at training generalists at the undergraduate and master's levels. The demands on professionals at both these levels will be great, and it remains to be seen whether their efforts can be concerted to effect social change in solving problems of unmet community needs and moving into preventative programs, particularly in health and welfare areas.

FOOTNOTES

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2. *Ibid*., p. 17

3. Includes full and part-time students.

4. American Journal of Nursing, 71:2346-51, December, 1971

5. Extending the Scope of Nursing Practice: A Report of the Secretary's Committee to Study Extended Roles for Nurses. Washington, D.C.: Department of Health, Education, and Welfare. November, 1971, p. 4

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10. Allan J. Wintner, D.D.S., "University of Pittsburgh: Curriculum in Motion," Jounal of Dental Education, May, 1972, p. 30.

11. *Ibid*., p. 33

12. *Ibid*., pp. 30-31

13. *Ibid*., p. 32

14. *Ibid*., pp. 33-34

15. *Ibid*., p. 33

16. Forty-Seventh Yearbook, Internships in Teacher Education, The Association for Student Teaching, 1968, p. 4

17. From interviews with faculty of the School of Education, University of Pittsburgh, May, 1972.

18. *Ibid*.

19. Columbia University Urban Center, Human Uses of the University, New York: Praeger Publishers, 1970, p. 134.

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21. From interviews with faculty of the Psychology Department, University of Pittsburgh, May, 1972.

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APPENDIX A

Volunteer Activities at the University of Pittsburgh YMCA

At the University of Pittsburgh, the YMCA is a major channel for student volunteer service in the community. As such, it represents a significant alternative for experiential learning at both undergraduate and graduate levels although most students participating are undergraduates. Approximately 1,420 University students were involved in various projects during 1971-1972. Projects include a number of activities, and they fall into five major areas: (1) Companionship-Enrichment Programs with Children; (2) Tutorials and Other Supplementary Educational Programs; (3) Volunteer Programs in Mental Health and Correctional Agencies; (4) Student to Student Programs (drug and draft counselling, foreign student activities, etc.; and (5) Leadership Groups.

Thus, this represents one of the largest student organizations at the University. The funding for this program is largely financed by the United Fund/Community Chest Agency (75 per cent), through the YMCA of Pittsburgh. The remaining 25 per cent is supplied through donations and fund-raising activities of the YMCA. There is no financial support from the University of Pittsburgh, with the exception of free office space in the Student Union.

Although the YMCA has always been involved in community service, the local volunteer movement, as it now operates, began about seven years ago at the University of Pittsburgh. The following are some of the major highlights as indicated by background data.

The data concerning the above activities indicate that the largest number of student volunteers are involved in Mental Health and Correctional

Programs, usually within the various mental hospitals and correctional institutions close to Pittsburgh. The Tutorial Program is a significantly large program reflecting a considerable number of children and student volunteers involved. It represents the second largest group of student volunteers. Companionship-enrichment programs and student-to-student programs are smaller and may represent a larger investment of time and may be one of the reasons for less volunteers. The student-to-student program represents more controversial approaches in the sense of the draft issue and drug problems among University students. The leadership groups at the student level represent student volunteers who are trained as leaders for various projects in the YMCA. The adult volunteers among the leadership groups represent, by and large, faculty who serve on the board of the University YMCA.

Major Changes in Program

The present director is attempting to introduce more structure which will assist student leaders in being more systematic in the carrying out of their tasks. Thus, at the goals and objectives level, the volunteer movement has become somewhat more secularized. In other words, there is a concern for the kind of learning that can be provided for the student (a conscious learning experience).

Problems Encountered in Program

Financial: The YMCA like many social service agencies has also been affected by the national economic circumstances, and all programs within the "Y" must be justified in a cost-benefit manner. That is, because the general budget of the YMCA in Pittsburgh has been tightened by less community funding available and all programs within the "Y", including the program at the University, must be justified. This results in the setting of new goals (e.g., an increase of volunteer participation of ten per cent) as a justification for an allocation of future financial resources.

Goal Setting at Experiential Level: At the goal setting level, students set their own goals and occasionally after a program is underway, the goals are not relevant to the needs of the participants being served. Related to this is the problem of finding ways to assist the student leader with his responsibilities, especially when there is an emphasis on self-reliance in setting goals. Thus, at the goal setting level are three levels of needs to be concerned with: (1) the needs of the person receiving the service; (2) the needs of the volunteers; and (3) the needs of student leaders.

Social Concern Issues: Although the primary emphasis is on direct services, there is a question as to how much the YMCA at the University can become involved in wider social issues which reflect racial and community problems. The director states, "We are not sure how we can become more constructive in dealing with the racial issues and there are few black volunteers which seems a result of our 'white image!"

In terms of providing field experiences, there is an increasing interest among University students to become involved with delinquents, but there are not enough opportunities to do volunteer work in this area. This is also true in the mental health field, but to a lesser extent.

Perceived Future Changes and Advantages

In addition to providing more structure for student coordinators, more concern will probably be given to having students involved in community projects. There is already some planning in this aspect for student involvement within the Oakland area. It is possible that students may eventually receive credit for volunteer activities. The School of Education, it was learned, is presently considering to offer their students a basic course in voluntarism, reflecting the importance it has for professional educators.

It is most likely that the volunteer movement will continue to expand within and outside the University and may eventually result in students receiving credit for their activities. Although the University of Pittsburgh's volunteer activities are primarily through the YMCA, which acts as an independent body from the University, the trend at the national level is for universities to have a central volunteer agency within the university structure.

Significantly, such a program can provide the student with a variety of learning situations in which to develop interpersonal skills which can result in a considerable amount of personal growth and the establishment of career goals. The fact that major responsibility for setting project goals rests with the students adds appreciably to their experience in terms of developing future administrative awareness of "relevance" and conflict in goal formulation.

APPENDIX B

Questions for Future Consideration

There are a number of questions and concerns that have arisen as a result of this exploratory study. Some of these questions reflect gaps in existing knowledge which may provide the basis for the development of research in various aspects of experiential learning.

(1) At the outset of this exploratory study, it was hoped that additional exploration and opinions of experiential learning could be gained from the student population as well. Assessment of the student experience might be accomplished by interviewing students concerning their views about the goals of the experiential learning component, and whether these goals are achievable and to what extent. Similar exploratory questions such as those included in this study could be utilized for comparison of perception between students and faculty. Two other groups could also be included, the experiential instructor and the person receiving the service. In view of the time needed for carrying out the research, such a study would most likely have to limit its scope to one or two professional schools.

(2) Team teaching as utilized in the School of Education might provide some fruitful research of interest in the administrative-political area. An assumption concerning this experience might be: Team teaching is a democratic process which leads to greater participation through sharing of goal setting and goal implementation. Therefore, administrative decisions regarding teaching and educational policy might become a cooperative venture among participants which alters traditional roles of teachers and administrators in the school system. Or, stated differently,

what might be the impact, influence, or consequences of this "democratizing" decision-making?

A second question concerning team teaching concerns the question of whether or not team teaching is an effective way of implementing experiential learning. It may be that team teaching, like many group processes, may approach a point where the participants do not gain as much as they once did. Is there a point in time wherein this can be recognized? Also, do some students find that the group process hinders their creativeness in teaching? If so, why does this happen?

(3) The professional schools clearly demonstrate that very often what a student learns in experiential learning is largely determined by the activities that shape his learning. Therefore, the introduction of interdisciplinary learning might enable students to realize a wider range of experiences directly and indirectly. The assumption being that interdisciplinary teaching in both class and experiential setting assist the student in identifying common areas of concern in spite of different approaches used. In so doing, students broaden their professional view, which, in turn, enables them to work more cooperatively with other professionals.

(4) There is a trend toward the development of experiential learning and the offering of professional degrees at the B.A. level. This may mean that the gradual extension of experiential learning at undergraduate levels will lead to increased specialization at the graduate level. This may, in turn, increase competition for specialized training which will intensify a concern for security and position rather than a concern and identification with social change problems, ideas, and values.

(5) The goal of all professional schools is to educate a student to become a competent professional. Yet it is extremely difficult to identify what is meant by competent. Therefore, efforts should be made to identify what is considered competent within a profession. Professional associations are groups that are established to maintain standards and promote a strong professional image. Perhaps research concerning the ideal image and what can realistically be expected might be a way of determining what is considered competent.

(6) Some experiential programs have faith in unstructured learning situations and assume that unstructured learning (i.e., student not told what he should study), in comparison to structured learning (assignments, tests, etc.), leads to greater autonomy (self-awareness, self-direction, increased confidence) in the long run, although the initial uncertainty experienced by the student can be very difficult. Further analysis of this assumption might enable experiential instructors to identify degrees of readiness for independent tasks by noting patterns of student response to learning tasks.

(7) Some proponents of experiential learning claim that working among minority groups or disadvantaged groups is important in changing attitudes of students (prejudices and stereotypes). This may be true, but would have to be evaluated in terms of degree of change. In any event, a further assumption such as the following might prove useful in determining the validity of experiential learning as a means of changing attitudes: Experiential learning provides students with cross-cultural experiences that lead to greater attitude change and perhaps this might be measured on a positive/more positive/negative/more negative scale.

(8) The term integration is used a great deal by educators of experiential learning to describe what should take place in the total theory-practice educative experience of a student. However, whether or not one can really assess a level of integration in another person or in oneself for that matter, raises a theoretical question concerning the meaning of integration. When this is done, it is seen that a variety of meanings can be applied to this concept.[1] There are philosophical, psychological, social, historical, and educational views involved. It may be that a professional school does have a criterion by which to assess a level of integration. However, even within a professional group, there are a variety of opinions concerning how one arrives at a decision as to whether the student has integrated theory with the experiential aspects of his knowledge. It is also suspected that it has become a term loosely used. One that has a principled sound to it, but taken for granted and not questioned in its common usages. It may be necessary and helpful for educators in the professions to reassess the various meanings and means of assessing levels of integration if it is to have significance of application in experiential learning.

It may be that there are special learning situations that promote integration. That the term is used frequently and with considerable emphasis there is no doubt. Whether it is clearly understood may be questioned, particularly in the experiential learning situation.

It is significant to note that there are few recent studies or articles concerning this concept. The dissertation research stated above was done in the mid-thirties and early forties and constitutes serious efforts at understanding the meaning of integration. What literature is available on the subject is more concerned with psychological levels of integration, although Biber, Bower, Sanford, and Kubie address themselves to this problem when they speak of student learning in higher education.[2] Hopkins discusses the concept at length and particularly its relation to education and the roles that students perform in society:

> Many, if not most contemporary educators, seem to regard education as a specific instrument designed to attack specific problems and hence expected to produce specific results. This conception runs counter to the integrative concept. Education is not a tool, nor a kit of tools. On the contrary, education is a universal flexible handle designed to fit all varieties of tools. Otherwise the student becomes a mere specialist, and as such will contribute, not to integration, but to increased fractionalism. Finally, he will create a society in which even he loses his function because neither he nor anyone else will know how the specialized operations are to contribute to the whole. In fact he will be a person who struggles against the whole.[3]

The statement is interesting because it was written in 1937, at a time when specialization was beginning to make its impact felt. In a sense, he gave an appropriate warning, for specialization today has come to fit his description for a number of professionals and laymen. Hopkins also felt that "Of all types of curriculums discussed, the experience curriculum offers greatest possibilities for meeting the integrating needs of pupils and teachers."[4]

Since the research effort in this area is scant, it would seem appropriate that increased efforts concerning the meaning and application of integration in higher education be seriously considered, particularly in experiential aspects of the professional schools.

(9) The length of time a student spends in experiential learning is often considerable. Some faculty believe this detracts from a proper awareness of conceptual material and does not allow for the student to

develop his reflective capacities. Is it possible to determine whether or not a shorter experience, but with selected learning situations, might promote a better learning experience? For example, what is the significance concerning the effect of intense and difficult situations over shorter periods of time? Certainly this adds to the student's ability to deal with crisis situations, but might it not also heighten his conceptual awareness? In relation to this, to what extent do simulation exercises provide greater awareness of both experiential and theoretical concerns? Simulation experiments have developed rapidly in the last few years and may prove to have a number of advantages as stated by Beecock, Coleman, and Raser.[5] However, it was only mentioned by one professional educator in this study, and was not viewed favorably as it was felt to be too artificial an experience.

(10) A number of new programs, particularly at the undergraduate level, are promoting the implementation of experiential learning among liberal arts schools. At this point, these programs are seen as "new" and somewhat anti-academic. However, it will be of interest to note the evaluation of these programs into more professional forms of experiential learning such as an increasing emphasis on evaluative norms, professional associations, routinization and bureaucratization. Thus, an interesting research for the future might be to assess the extent to which this educational movement will become professionalized at the undergraduate level.

FOOTNOTES

1. Daniel Brooks, The Concept of Integration, (unpublished dissertation, University of Pennsylvania, 1942); see also R.J. Connole, A Study of the Concept Integration in Present Day Curriculum Making. (unpublished dissertation, Catholic University of America, 1937).

2. Biber B. "A Learning-Teaching Paradign Futegrating Intellectual and effective Processes," E.M. Bowes and W.G. Hullistes (eds), Behavivial Science Frontiers in Education. New York: John Wiley and Sons, Inc. 1967

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3. Levi Thomas Hopkins, Integration Its Meaning and Application, New York: D. Appleton-Century Co.,-Inc., 1937, pp. 23-24.

4. Ibid., p. 274

5. Sarane S. Boocock and James S. Coleman, "Games with Simulated Environments in Learning, "Sociology of Education, Vol. 39, No. 3, Summer, 1966; see also John R. Raser, Simulation and Society, Boston: Allyn and Bacon, Inc., 1969.

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